

Report 11668
July 2000

AEROJET

**Integrated Advanced Microwave Sounding Unit-A
(AMSU-A)**

Performance Verification Report

Initial Comprehensive Performance Test Report,

P/N 1331720-3-IT, S/N 109/A1

**Contract No. NAS 5-32314
CDRL 208**

Submitted to:

**National Aeronautics and Space Administration
Goddard Space Flight Center
Greenbelt, Maryland 20771**

Submitted by:

**Aerojet
1100 West Hollyvale Street
Azusa, California 91702**

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APPENDIX A

TEST DATA SHEETS

10.1 Scope. This appendix contains the test data sheets for all tests and inspections listed in section 3.

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TEST DATA SHEET 1 (Sheet 1 of 9)
Grounding System Test (Paragraph 3.2.4.1)

J1 of Spacecraft Interface				
From Chassis Ground to	Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J1-1	+28 V MLB	> 100k	OVLD	P
J1-2	+28 V MLB	> 100k	OVLD	P
J1-3	+28 V MLB RTN	> 100k	30M Ω	P
J1-4	+28 V MLB RTN	> 100k	32M Ω	P
J1-5	+28 V PLB	> 100k	33M Ω	P
J1-6	+28 V PLB	> 100k	38M Ω	P
J1-7	+28 V PLB RTN	> 100k	36M Ω	P
J1-8	+28 V PLB RTN	> 100k	33M Ω	P
J1-9	+28 V TMB	> 100k	OVLD	P
J1-10	28 V TMB RTN	> 100k	OVLD	P
J1-11	NO CONNECTION	> 100k	OVLD	P
J1-12	NO CONNECTION	> 100k	OVLD	P
J1-13	CHASSIS GROUND (E1)	< 1	.13 Ω	P
J1-14	+28 V MLB	> 100k	OVLD	P
J1-15	+28 V MLB	> 100k	OVLD	P
J1-16	+28 V MLB RTN	> 100k	30M Ω	P
J1-17	+28 V MLB RTN	> 100k	OVLD	P
J1-18	+28 V PLB	> 100k	OVLD	P
J1-19	+28 V PLB	> 100k	OVLD	P
J1-20	+28 V PLB RTN	> 100k	OVLD	P
J1-21	+28 V PLB RTN	> 100k	OVLD	P
J1-22	+28 V TMB	> 100k	OVLD	P
J1-23	28 V TMB RTN	> 100k	OVLD	P
J1-24	SAFETY HTR PWR	> 100k	OVLD	P
J1-25	SAFETY HTR RTN	> 100k	OVLD	P

OVLD = > 120 M Ω

TEST DATA SHEET-1 (Sheet 2 of 9)
Grounding Interface Test (Paragraph 3.2.4.1)

J2 of Spacecraft Interface				
From Chassis Ground to	Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J2-1	Chassis Ground (E2)	< 1	0.10-Ω	P
J2-2	DATA CLOCK (C1)	> 100k	OVLD	P
J2-3	Signal Return	> 100k	65 MΩ	P
J2-4	No Connection	> 100k	OVLD	P
J2-5	DIGITAL-A DATA OUT	> 100k	OVLD	P
J2-6	DATA ENABLE (A1)	> 100k	88 MΩ	P
J2-7	8 SEC SYNC PULSE	> 100k	87 MΩ	P
J2-8	No Connection	> 100k	OVLD	P
J2-9	No Connection	> 100k	OVLD	P

J3 of Spacecraft Interface				
From Chassis Ground to	Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J3-1	1.248 MHz CLK	> 100k	45 MΩ	P
J3-2	1.248 MHz CLK RTN	> 100k	OVLD	P
J3-3	Chassis GND (E3)	< 1	0.05-Ω	P

J5 of Spacecraft Interface				
From Chassis Ground to	Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J5-1	Chassis Ground (E5)	< 1	0.11-Ω	P
J5-2	MODULE PWR IND	> 100k	32 MΩ	P
J5-3	COLD CAL POS MSB (OUT)	> 100k	36 MΩ	P
J5-4	No Connection	> 100k	OVLD	P
J5-5	SCANNER A1-2 ON/OFF	> 100k	37 MΩ	P
J5-6	ANT IN COLD CAL POS	> 100k	40 MΩ	P
J5-7	PLL PRI/RED	> 100k	42 MΩ	P
J5-8	No Connection	> 100k	OVLD	P
J5-9	SURV HTR ON/OFF	> 100k	42 MΩ	P
J5-10	No Connection	> 100k	OVLD	P
J5-11	COLD CAL POS LSB (OUT)	> 100k	42 MΩ	P
J5-12	SCANNER A1-1 ON/OFF	> 100k	46 MΩ	P
J5-13	ANT IN WARM CAL POS	> 100k	47 MΩ	P
J5-14	ANT IN NADIR POS	> 100k	49 MΩ	P
J5-15	FULL SCAN MODE	> 100k	51 MΩ	P

OVLD = > 120 MΩ

TEST DATA SHEET 1 (Sheet 3 of 9)
Grounding System Test (Paragraph 3.2.4.1)

J4 of Spacecraft Interface				
From Chassis Ground to	Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J4-1	Chassis Ground (E4)	< 1	0.13 Ω	P
J4-2	MODULE PWR DISCONN	> 100k	22 meg Ω	P
J4-3	SURVIVAL HTR ON	> 100k	24 meg Ω	P
J4-4	MODULE TOTALLY OFF	> 100k	26 meg Ω	P
J4-5	SCANNER A1-2 ON/OFF	> 100k	28 meg Ω	P
J4-6	ANT AT COLD CAL POS	> 100k	30 meg Ω	P
J4-7	PLL SELECT	> 100k	32 meg Ω	P
J4-8	ANT AT NADIR POS	> 100k	34 meg Ω	P
J4-9	COLD CAL POS MSB (IN)	> 100k	36 meg Ω	P
J4-10	No Connection	> 100k	OVL D	P
J4-11	No Connection	> 100k	OVL D	P
J4-12	+10 V INTERFACE BUS	> 100k	34 meg Ω	P
J4-13	10 V INTERFACE BUS RTN	> 100k	23 meg Ω	P
J4-14	MODULE PWR CONN	> 100k	43 meg Ω	P
J4-15	SURVIVAL HTR OFF	> 100k	44 meg Ω	P
J4-16	SCANNER A1-1 ON/OFF	> 100k	47 meg Ω	P
J4-17	ANT AT WARM CAL POS	> 100k	48 meg Ω	P
J4-18	FULL SCAN	> 100k	40 meg Ω	P
J4-19	COLD CAL POS LSB (IN)	> 100k	40 meg Ω	P
J4-20	No Connection	> 100k	OVL D	P
J4-21	No Connection	> 100k	OVL D	P
J4-22	No Connection	> 100k	OVL D	P
J4-23	No Connection	> 100k	OVL D	P
J4-24	+10 V INTERFACE BUS	> 100k	27 meg Ω	P
J4-25	10 V INTERFACE BUS RTN	> 100k	17 meg Ω	P

OVL D \Rightarrow 120M Ω

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TEST DATA SHEET 1 (Sheet 4 of 9)
Grounding System Test (Paragraph 3.2.4.1)

J6 of Spacecraft Interface				
From Chassis Ground to	Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J6-1	Chassis GND (E6)	< 1	213 Ω	P
J6-2	RF SHELF A1-1 TEMP	> 100k	OVLD	P
J6-3	A1-1 SCAN. MTR. TEMP	> 100k	OVLD	P
J6-4	WARM LOAD A1-1 TEMP	> 100k	OVLD	P
J6-5	No Connection	> 100k	OVLD	P
J6-6	PLLO RED LOCK DETECT	> 100k	11M Ω	P
J6-7	No Connection	> 100k	OVLD	P
J6-8	A1-1 DRIVE MTR CURR	> 100k	14M Ω	P
J6-9	+15 V ANT DR MON	> 100k	14M Ω	P
J6-10	+5 V ANT DR MON	> 100k	15M Ω	P
J6-11	+15 V SIG PROC MON	> 100k	16M Ω	P
J6-12	+5 V SIG PROC MON	> 100k	18M Ω	P
J6-13	L.O. VOLTAGE CH 3 MON	> 100k	19M Ω	P
J6-14	L.O. VOLTAGE CH 5 MON	> 100k	20M Ω	P
J6-15	L.O. VOLTAGE CH 7 MON	> 100k	22M Ω	P
J6-16	+15 VDC PLL LO MON	> 100k	22M Ω	P
J6-17	+10 V MIXER/AMP MON	> 100k	24M Ω	P
J6-18	L.O. VOLTAGE CH 15 MON	> 100k	27M Ω	P
J6-19	No Connection	> 100k	OVLD	P
J6-20	28 V TMB RTN	> 100k	OVLD	P
J6-21	RF SHELF A1-2 TEMP	> 100k	OVLD	P
J6-22	A1-2 SCAN MTR TEMP	> 100k	OVLD	P
J6-23	WARM LOAD A1-2 TEMP	> 100k	OVLD	P
J6-24	No Connection	> 100k	OVLD	P
J6-25	PLLO PRI LOCK DETECT	> 100k	25M Ω	P
J6-26	No Connection	> 100k	OVLD	P
J6-27	A1-2 DRIVE MTR CURR	> 100k	28M Ω	P
J6-28	-15 V ANT DR MON	> 100k	27M Ω	P
J6-29	-15 V SIG PROC MON	> 100k	27M Ω	P
J6-30	L.O. VOLTAGE CH 4 MON	> 100k	28M Ω	P
J6-31	L.O. VOLTAGE CH 6 MON	> 100k	30M Ω	P
J6-32	L.O. VOLTAGE CH 8 MON	> 100k	31M Ω	P
J6-33	-15 VDC PLL LO MON	> 100k	32M Ω	P
J6-34	+8 V IF AMP MON	> 100k	33M Ω	P
J6-35	No Connection	> 100k	OVLD	P
J6-36	No Connection	> 100k	OVLD	P
J6-37	No Connection	> 100k	OVLD	P

OVLD = > 120M Ω

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TEST DATA SHEET 1 (Sheet 5 of 9)
Grounding System Test (Paragraph 3.2.4.1)

J7 of Spacecraft Interface				
From Chassis Ground to	Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J7-1	Chassis GND (E7)	< 1	11 Ω	P
J7-2	No Connection	> 100k	OVL	P
J7-3	REDUN PLO LOCK DET	> 100k	3 meg Ω	P
J7-4	15 V RTN (2/3)	> 100k	OVL	P
J7-5	15 V RTN (2/3)	> 100k	4 meg Ω	P
J7-6	DUMP TEST POINT	> 100k	6 meg Ω	P
J7-7	No Connection	> 100k	OVL	P
J7-8	CH3 OUT TEST POINT	> 100k	18 meg Ω	P
J7-9	CH4 OUT TEST POINT	> 100k	20 meg Ω	P
J7-10	CH5 OUT TEST POINT	> 100k	22 meg Ω	P
J7-11	CH6 OUT TEST POINT	> 100k	23 meg Ω	P
J7-12	CH7 OUT TEST POINT	> 100k	24 meg Ω	P
J7-13	CH8 OUT TEST POINT	> 100k	27 meg Ω	P
J7-14	CH9 OUT TEST POINT	> 100k	22 meg Ω	P
J7-15	No Connection	> 100k	OVL	P
J7-16	No Connection	> 100k	OVL	P
J7-17	GSE CMD LSB	> 100k	18 meg Ω	P
J7-18	GSE CMD MSB-1	> 100k	19 meg Ω	P
J7-19	+5 V GSE INTERLOCK A	> 100k	20 meg Ω	P
J7-20	No Connection	> 100k	OVL	P
J7-21	No Connection	> 100k	OVL	P
J7-22	PRI PLO LOCK DET	> 100k	17 meg Ω	P
J7-23	No Connection	> 100k	OVL	P
J7-24	I/H TEST POINT	> 100k	23 meg Ω	P
J7-25	No Connection	> 100k	OVL	P
J7-26	15 V RTN (2/3)	> 100k	18 meg Ω	P
J7-27	CH10 OUT TEST POINT	> 100k	27 meg Ω	P
J7-28	CH11 OUT TEST POINT	> 100k	29 meg Ω	P
J7-29	CH12 OUT TEST POINT	> 100k	32 meg Ω	P
J7-30	CH13 OUT TEST POINT	> 100k	34 meg Ω	P
J7-31	CH14 OUT TEST POINT	> 100k	35 meg Ω	P
J7-32	CH15 OUT TEST POINT	> 100k	37 meg Ω	P
J7-33	No Connection	> 100k	OVL	P
J7-34	No Connection	> 100k	OVL	P
J7-35	GSE CMD MSB	> 100k	39 meg Ω	P
J7-36	5 V RTN (1)	> 100k	34 meg Ω	P
J7-37	+5 V GSE INTERLOCK B	> 100k	25 meg Ω	P

OVL \Rightarrow 120 M Ω

TEST DATA SHEET 1 (Sheet 6 of 9)
Grounding Interface Test (Paragraph 3.2.4.1)

Source Pin	Destination Pin	Source Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J1-1	J1-2	+28 V MLB	< 1	0.23 Ω	P
J1-1	J1-14	+28 V MLB	< 1	0.27 Ω	P
J1-1	J1-15	+28 V MLB	< 1	0.30 Ω	P
J1-3	J1-4	28 V MLB RTN	< 1	0.22 Ω	P
J1-3	J1-16	28 V MLB RTN	< 1	0.24 Ω	P
J1-3	J1-17	28 V MLB RTN	< 1	0.25 Ω	P
J1-5	J1-6	+28 V PLB	< 1	0.22 Ω	P
J1-5	J1-18	+28 V PLB	< 1	0.25 Ω	P
J1-5	J1-19	+28 V PLB	< 1	0.24 Ω	P
J1-7	J1-8	28 V PLB RTN	< 1	0.23 Ω	P
J1-7	J1-20	28 V PLB RTN	< 1	0.23 Ω	P
J1-7	J1-21	28 V PLB RTN	< 1	0.24 Ω	P
J1-9	J1-22	+28 V TMB	< 1	0.22 Ω	P
J1-10	J1-23	28 V TMB RTN	< 1	0.22 Ω	P
J1-10	J6-20	28 V TMB RTN	< 1	0.44 Ω	P
J4-12	J4-24	+10 V INTERFACE BUS	< 1	0.44 Ω	P
J4-13	J4-25	10 V INTERFACE BUS RTN	< 1	0.42 Ω	P
J1-1	J1-3	+28 V MLB	> 100k	OVLD	P
J1-1	J1-5	+28 V MLB	> 100k	OVLD	P
J1-1	J1-7	+28 V MLB	> 100k	OVLD	P
J1-1	J1-9	+28 V MLB	> 100k	OVLD	P
J1-1	J1-10	+28 V MLB	> 100k	OVLD	P
J1-1	J1-24	+28 V MLB	> 100k	OVLD	P
J1-1	J1-25	+28 V MLB	> 100k	OVLD	P
J1-1	J2-3	+28 V MLB	> 100k	OVLD	P
J1-1	J4-12	+28 V MLB	> 100k	OVLD	P
J1-1	J4-13	+28 V MLB	> 100k	OVLD	P
J1-3	J1-5	28 V MLB RTN	> 100k	319K Ω	P
J1-3	J1-7	28 V MLB RTN	> 100k	292K Ω	P
J1-3	J1-9	28 V MLB RTN	> 100k	OVLD	P
J1-3	J1-10	28 V MLB RTN	> 100k	OVLD	P
J1-3	J1-24	28 V MLB RTN	> 100k	OVLD	P
J1-3	J1-25	28 V MLB RTN	> 100k	OVLD	P
J1-3	J2-3	28 V MLB RTN	> 100k	160K Ω	P
J1-3	J4-12	28 V MLB RTN	> 100k	160K Ω	P
J1-3	J4-13	28 V MLB RTN	> 100k	335K Ω	P

OVLD = > 120 M Ω

TEST DATA SHEET 1 (Sheet 7 of 9)
Grounding Interface Test (Paragraph 3.2.4.1)

Source Pin	Destination Pin	Source Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J1-5	J1-7	+28 V PLB	> 100k	OVLD	P
J1-5	J1-9	+28 V PLB	> 100k	OVLD	P
J1-5	J1-10	+28 V PLB	> 100k	OVLD	P
J1-5	J1-24	+28 V PLB	> 100k	OVLD	P
J1-5	J1-25	+28 V PLB	> 100k	OVLD	P
J1-5	J2-3	+28 V PLB	> 100k	OVLD	P
J1-5	J4-12	+28 V PLB	> 100k	OVLD	P
J1-5	J4-13	+28 V PLB	> 100k	OVLD	P
J1-7	J1-9	28 V PLB RTN	> 100k	OVLD	P
J1-7	J1-10	28 V PLB RTN	> 100k	OVLD	P
J1-7	J1-24	28 V PLB RTN	> 100k	OVLD	P
J1-7	J1-25	28 V PLB RTN	> 100k	OVLD	P
J1-7	J2-3	28 V PLB RTN	> 100k	160K Ω	P
J1-7	J4-12	28 V PLB RTN	> 100k	370K Ω	P
J1-7	J4-13	28 V PLB RTN	> 100k	160K Ω	P
J1-9	J1-10	+28 V TMB	> 100k	1.6M Ω	P
J1-9	J1-24	+28 V TMB	> 100k	OVLD	P
J1-9	J1-25	+28 V TMB	> 100k	OVLD	P
J1-9	J2-3	+28 V TMB	> 100k	OVLD	P
J1-9	J4-12	+28 V TMB	> 100k	OVLD	P
J1-9	J4-13	+28 V TMB	> 100k	OVLD	P
J1-10	J1-24	28 V TMB RTN	> 100k	OVLD	P
J1-10	J1-25	28 V TMB RTN	> 100k	OVLD	P
J1-10	J2-3	28 V TMB RTN	> 100k	OVLD	P
J1-10	J4-12	28 V TMB RTN	> 100k	OVLD	P
J1-10	J4-13	28 V TMB RTN	> 100k	OVLD	P
J1-24	J1-25	SAFETY HTR PWR	> 100k	OVLD	P
J1-24	J2-3	SAFETY HTR PWR	> 100k	OVLD	P
J1-24	J4-12	SAFETY HTR PWR	> 100k	OVLD	P
J1-24	J4-13	SAFETY HTR PWR	> 100k	OVLD	P
J1-25	J2-3	SAFETY HTR PWR RTN	> 100k	OVLD	P
J1-25	J4-12	SAFETY HTR PWR RTN	> 100k	OVLD	P
J1-25	J4-13	SAFETY HTR PWR RTN	> 100k	OVLD	P
J2-3	J4-12	SIGNAL RTN	> 100k	2.1M Ω	P
J2-3	J4-13	SIGNAL RTN	> 100k	183K Ω	P
J4-12	J4-13	+10 V INTERFACE BUS	> 100k	400K Ω	P

OVLD = > 120 M Ω

TEST DATA SHEET 1 (Sheet 8 of 9)
Grounding Interface Test (Paragraph 3.2.4.1)

Source Pin	Destination Pin	Source Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J2-2	J4-13	DATA CLOCK (C1)	> 2k	2.5M Ω	P
J2-5	J4-13	DIGITAL-A DATA OUT	> 2k	110K Ω	P
J2-6	J4-13	DATA ENABLE (A1)	> 2k	112K Ω	P
J2-7	J4-13	8 SEC SYNC PULSE	> 2k	112K Ω	P
J3-1	J4-13	1.248 MHZ CLK	> 2k	112K Ω	P
J3-2	J4-13	1.248 MHZ CLK RTN	> 2k	OVLD	P
J4-2	J4-13	MODULE PWR DISCONN	> 2k	112K Ω	P
J4-3	J4-13	SURVIVAL HTR ON	> 2k	112K Ω	P
J4-4	J4-13	MODULE TOTALLY OFF	> 2k	112K Ω	P
J4-5	J4-13	SCANNER A1-2 ON/OFF	> 2k	112K Ω	P
J4-6	J4-13	ANT AT COLD CAL POS	> 2k	112K Ω	P
J4-7	J4-13	PLL SELECT	> 2k	112K Ω	P
J4-8	J4-13	ANT AT NADIR POS	> 2k	112K Ω	P
J4-9	J4-13	COLD CAL POS MSB (IN)	> 2k	112K Ω	P
J4-14	J4-13	MODULE PWR CONN	> 2k	112K Ω	P
J4-15	J4-13	SURVIVAL HTR OFF	> 2k	112K Ω	P
J4-16	J4-13	SCANNER A1-1 ON/OFF	> 2k	112K Ω	P
J4-17	J4-13	ANT AT WARM CAL POS	> 2k	112K Ω	P
J4-18	J4-13	FULL SCAN	> 2k	112K Ω	P
J4-19	J4-13	COLD CAL POS LSB (IN)	> 2k	112K Ω	P
J5-2	J4-13	MODULE PWR IND	> 2k	119K Ω	P
J5-3	J4-13	COLD CAL POS MSB (OUT)	> 2k	119K Ω	P
J5-5	J4-13	SCANNER A1-2 ON/OFF	> 2k	118K Ω	P
J5-6	J4-13	ANT IN COLD CAL POS	> 2k	119K Ω	P
J5-7	J4-13	PLL PRI/RED	> 2k	119K Ω	P
J5-9	J4-13	SURV HTR ON/OFF	> 2k	119K Ω	P
J5-11	J4-13	COLD CAL POS LSB (OUT)	> 2k	118K Ω	P
J5-12	J4-13	SCANNER A1-1 ON/OFF	> 2k	119K Ω	P
J5-13	J4-13	ANT IN WARM CAL POS	> 2k	119K Ω	P
J5-14	J4-13	ANT IN NADIR POS	> 2k	120K Ω	P
J5-15	J4-13	FULL SCAN MODE	> 2k	118K Ω	P

OVLD = > 120K Ω

TEST DATA SHEET 1 (Sheet 9 of 9)
Grounding Interface Test (Paragraph 3.2.4.1)

Source Pin	Destination Pin	Source Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J6-2	J1-10	RF SHELF A1-1 TEMP	> 2k	14.7K Ω	P
J6-3	J1-10	A1-1 SCAN MTR TEMP	> 2k	14.7K Ω	P
J6-4	J1-10	WARM LOAD A1-1 TEMP	> 2k	14.7K Ω	P
J6-6	J4-13	PLLO RED LOCK DETECT	> 2k	59.0K Ω	P
J6-8	J4-13	A1-1 DRIVE MTR CVR	> 2k	1.6M Ω	P
J6-9	J4-13	+15 VDC ANT DRIVE MON	> 2k	190K Ω	P
J6-10	J4-13	+5 VDC ANT DRIVE MON	> 2k	192K Ω	P
J6-11	J4-13	+15 VDC SIG PROC MON	> 2k	55.2K Ω	P
J6-12	J4-13	+5VDC SIG PROC MON	> 2k	57.0K Ω	P
J6-13	J4-13	L.O. VOLTAGE CH3 MON	> 2k	57.0K Ω	P
J6-14	J4-13	L.O. VOLTAGE CH5 MON	> 2k	59.0K Ω	P
J6-15	J4-13	L.O. VOLTAGE CH7 MON	> 2k	7.0K Ω	P
J6-16	J4-13	+15 VDC PLL LO MON	> 2k	56.0K Ω	P
J6-17	J4-13	+10 V MIXER/AMP MON	> 2k	54.0K Ω	P
J6-18	J4-13	L.O. VOLTAGE CH15 MON	> 2k	56.0K Ω	P
J6-21	J4-10	RF SHELF A1-2 TEMP	> 2k	14.7K Ω	P
J6-22	J4-10	A1-2 SCAN MTR TEMP	> 2k	14.7K Ω	P
J6-23	J4-10	WARM LOAD A1-2 TEMP	> 2k	14.7K Ω	P
J6-25	J4-13	PLLO PRI LOCK DETECT	> 2k	62.0K Ω	P
J6-27	J4-13	A1-2 DRIVE MTR CURR	> 2k	1.6M Ω	P
J6-28	J4-13	-15 VDC ANT DRIVE MON	> 2k	195K Ω	P
J6-29	J4-13	-15 VDC SIG PROC MON	> 2k	104K Ω	P
J6-30	J4-13	L.O. VOLTAGE CH4 MON	> 2k	57K Ω	P
J6-31	J4-13	L.O. VOLTAGE CH6 MON	> 2k	57K Ω	P
J6-32	J4-13	L.O. VOLTAGE CH8 MON	> 2k	57K Ω	P
J6-33	J4-13	-15 VDC PLL LO MON	> 2k	109K Ω	P
J6-34	J4-13	IF AMP MON	> 2k	58K Ω	P

Circle Test:



LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order:

748613

S/N:

108

Test Systems Engineer

11-19-99

Date



11-17-99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date



NOV 19 99

TEST DATA SHEET 2
+28 MLB During Turn-on Transient (Paragraph 3.2.4.2.1.1)

At 28.56 Vdc:

Step	Parameter	Measured/ Calculated	Required*		
			S/N 101-104	S/N 105 & up	Pass/ Fail
7	Time to reach steady state current	<u>223.3</u> ms	20 ms max	300 ms max	P
8	Peak Current	<u>4.94</u> Amps	10.6 Amps	5.9 Amps	P
10	Rate of Change (Slope): dI/dT	<u>82.07</u> mA/μs	677 mA/μs	250 mA/μs	P

At 27.44 Vdc:

Step	Parameter	Measured/ Calculated	Required*		
			S/N 101-104	S/N 105 & up	Pass/ Fail
7	Time to reach steady state current	<u>238.7</u> ms	20 ms max	300 ms max	P
8	Peak Current	<u>4.41</u> Amps	10.6 Amps	5.9 Amps	P
10	Rate of Change (Slope): dI/dT	<u>100.44</u> mA/μs	677 mA/μs	250 mA/μs	P

At 28.00 Vdc:

Step	Parameter	Measured/ Calculated	Required*		
			S/N 101-104	S/N 105 & up	Pass/ Fail
7	Time to reach steady state current	<u>236.6</u> ms	20 ms max	300 ms max	P
8	Peak Current	<u>4.40</u> Amps	10.6 Amps	5.9 Amps	P
10	Rate of Change (Slope): dI/dT	<u>98.5</u> mA/μs	677 mA/μs	250 mA/μs	P

* Refer to Figure 5.

Circle Test:



LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 108



11-19-99

Test Systems Engineer
Ray H. H. H.
268

11-19-99
Date
NOV 19 99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

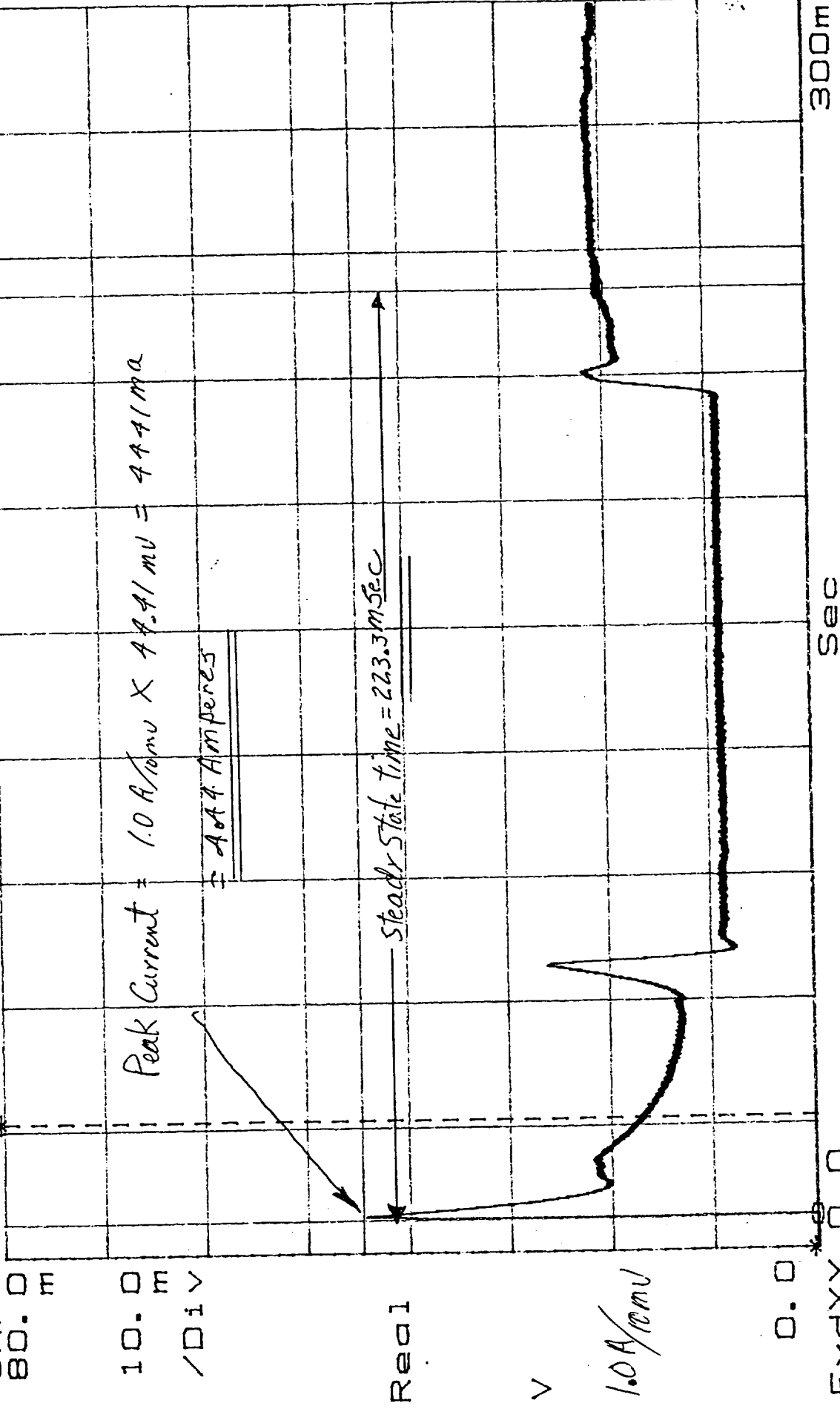
—

—

X=231: 2ms ΔX=223: 3ms Y=44: 5576m ΔY=44: 41mV

Y=20: 0531m ΔY=20: 92mV

CAP TIM BUF



TDS-2

1ST CPT

OP: 0810

SN: 109

324.21.1 MLB TURN-ON

TEST ENG: *[Signature]* DATE: 11-11-88

X=8.547ms ΔX=15.62μs Y=44.5576m ΔY=44.51mV

Yc=36.2084m ΔYc=12.82mV

CAP TIM BUF

80.0 m

10.0 m

/Div

Real

V

10A/10mV

0.0

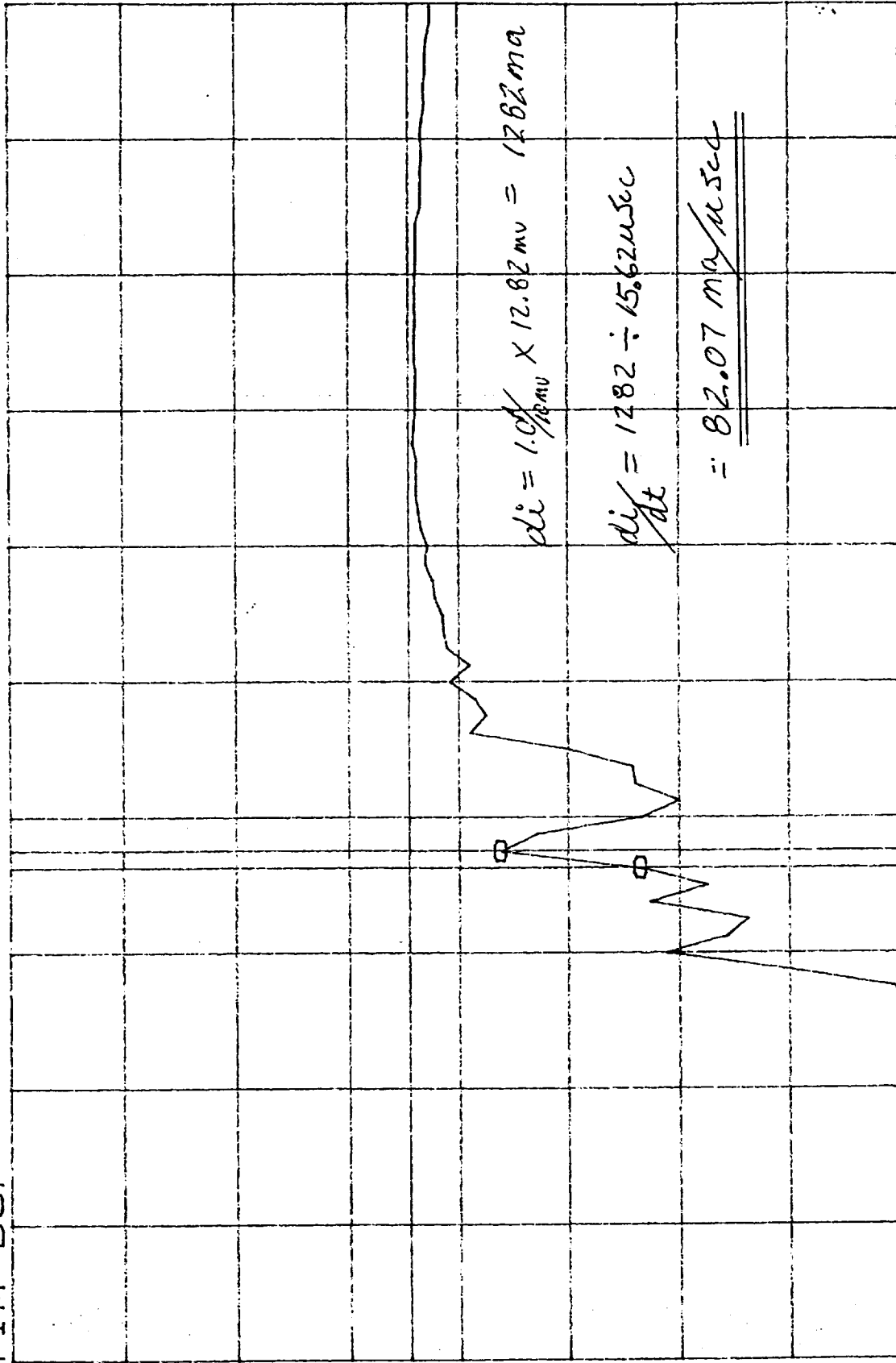
FxdXY 8.08m

Sec

9.33m

9/6: 748613 OP: 0810 1ST CPT TDS-2
PN: 1331720-3-IT SN: 109 32.4.2.11 M.L.B di/dt

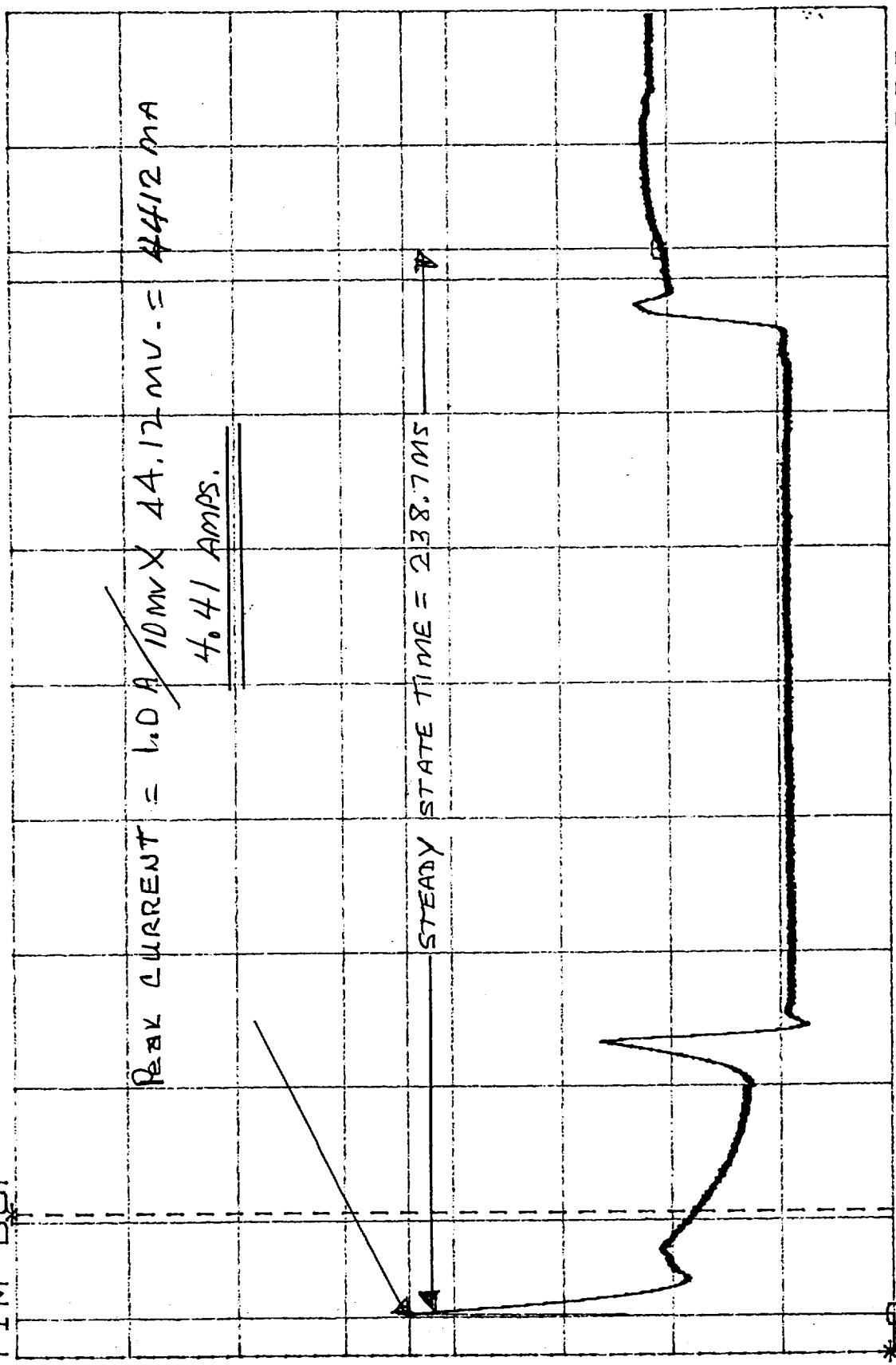
TEST ENG: Ray [Signature] DATE: 11-19-99



X=8.391ms ΔX=238.7ms Y=44.1212m ΔY=44.12mV
 Yd=-820.59μ ΔYd=21.54mV

CAP TIM BUF
 80.0 m

10.0 m
 /Div



Real

V

1.0A / 10mV
 0.0

FXDXY 0.0

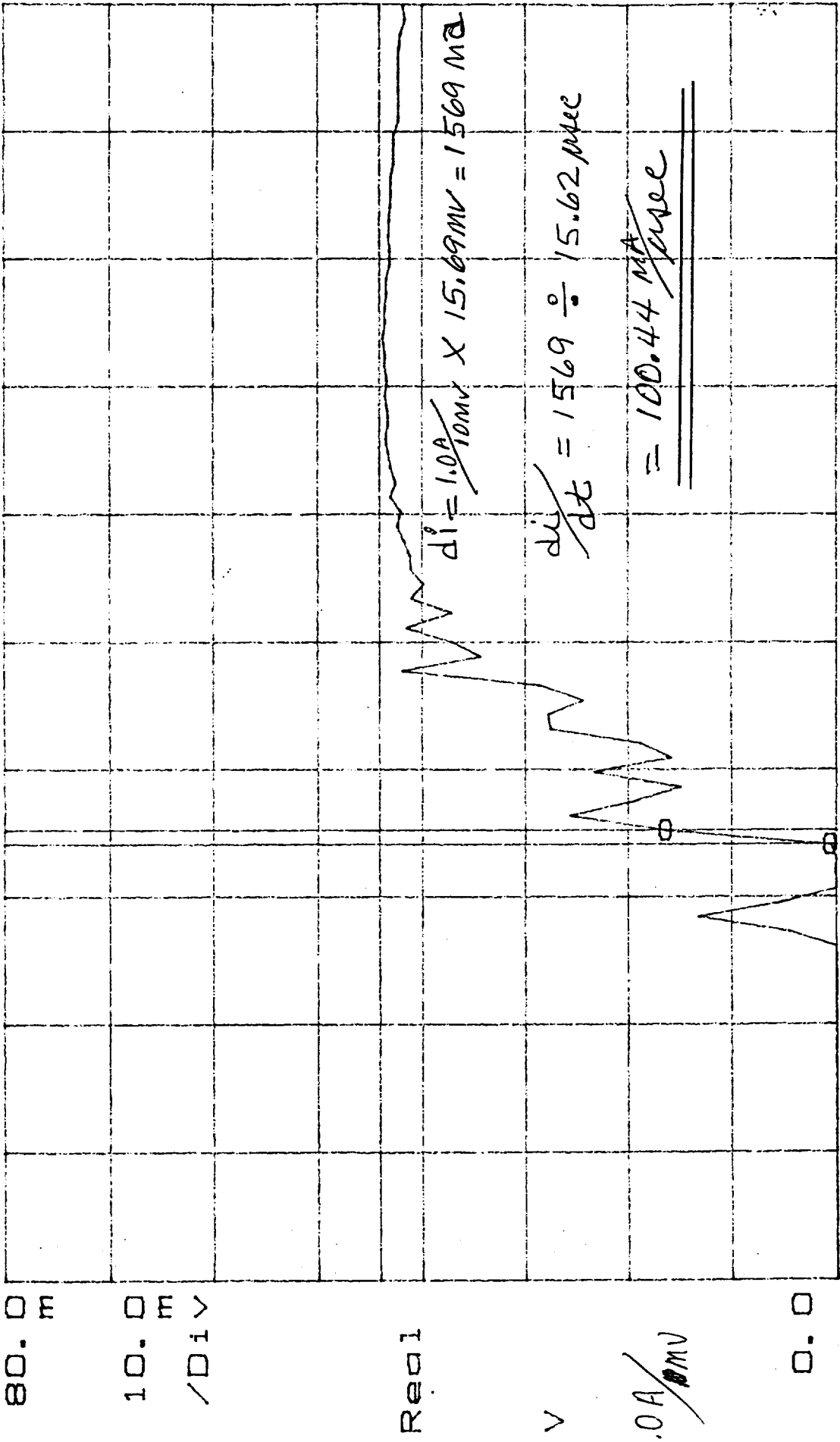
Sec

300m

S/O: 748613 OP: 0810 1ST CPT TDS-2
 PN: 1331720-3-IT SN: 102 MID TION-0.1 TEST ENG: Ray [Signature] DATE: 11-19-99

X=8.875ms ΔX=15.62μs Y=44.1212m ΔY=44.12mV
 Y0=16.3092m ΔY0=15.69mV

CAP TIM BUF



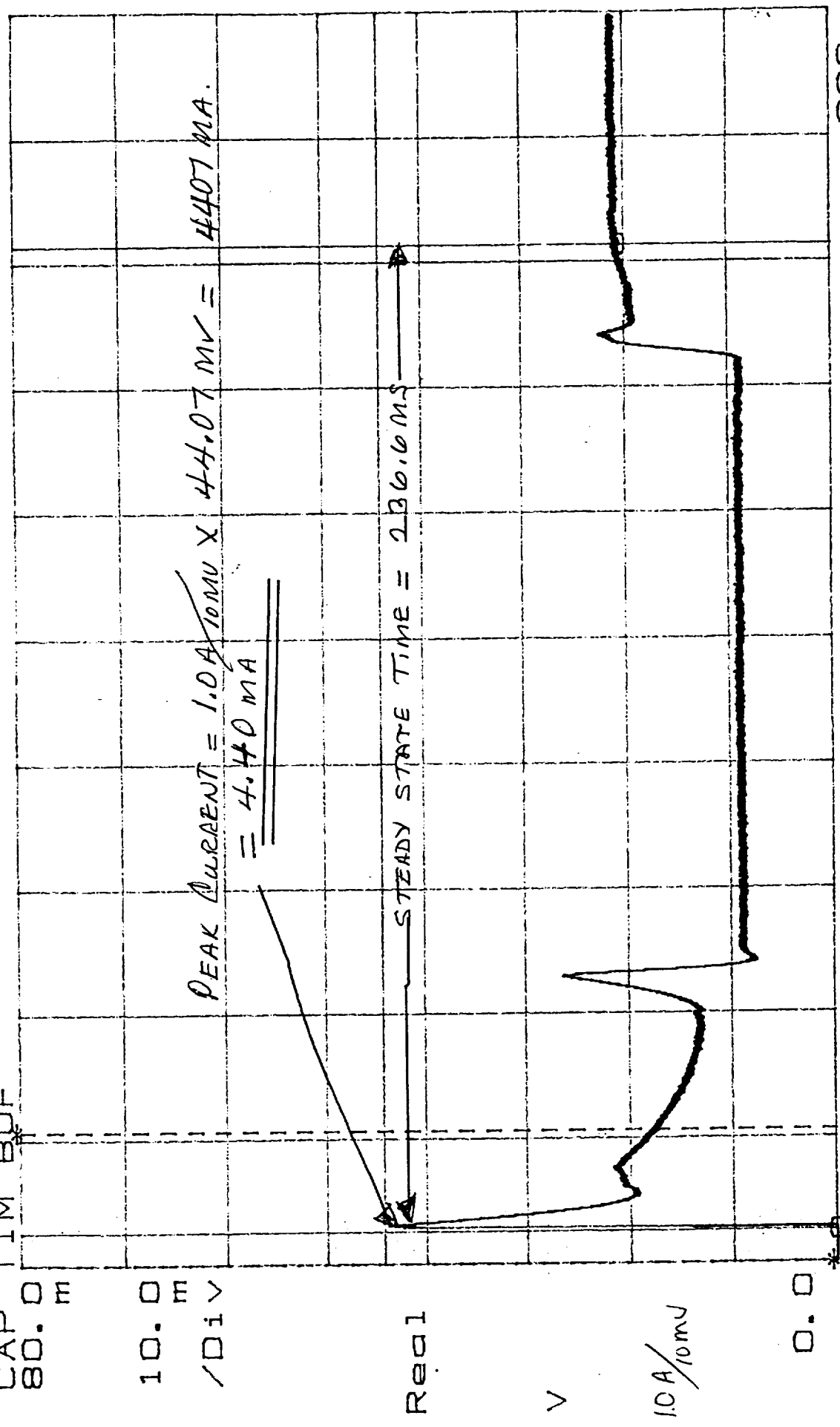
FxdXY 8.39m 9.77m

S/O: 748613 OP: 0810 1ST CPT TDS-2
 P/N: 1331727-3-II SN: 109 3.2.401.1 MLB di/dt TEST ENG: Ray Bunting DATE: 11-19-99

$X=7.703\text{ms}$ $\Delta X=236.6\text{ms}$ $Y=48.4848\mu$ $\Delta Y=44.07\text{mV}$
 $Y_0=-615.44\mu$ $\Delta Y_0=20.98\text{mV}$

CAP TIM BUF
 80.0 M

10.0 M
 /Div



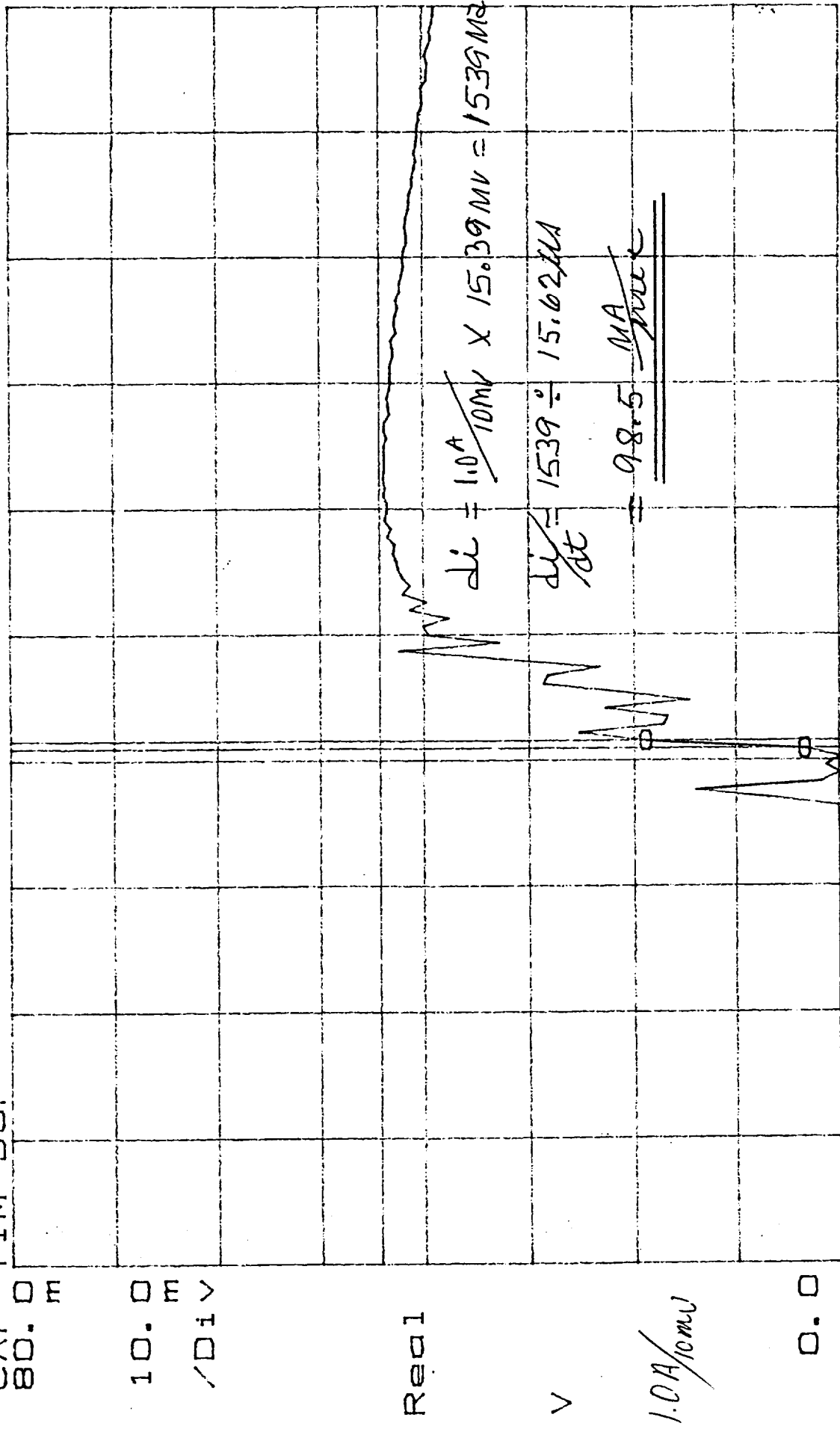
FxdXY 0.0 TDS-2 300m

96: 748613 0A: 0810 1ST CPT +28.0V MLB TURN-ON TEST ENG: Ray DeLong DATE: 11-19-99
 PN: 1331720-3-II SN: 101

Y=48.4848μ ΔY=44.07mV

X=8.703ms ΔX=15.62μS
Y=18.7197m ΔY=15.39mV

CAP TIM BUF



Real V 1.0A/10mV 0.0 FxdXY 7.7m 10.1m

96: 748613 OP: 0810 1ST CPT TDS-2
PN: 1337(-3-IT SN: 101 +28.0V MLB di/dt TEST ENG: Ray [signature] 11-17-88

TEST DATA SHEET 3
+28 MLB Operating Power (Paragraph 3.2.4.2.1.2)

Step	+28V MLB at 27 Volts	Measured	Units	Required	Pass/Fail
2	+28 V MLB voltage at 27 V (V_b) (Measured)	27.1	Volts	27.0 ± 0.1	P
3	Average Current (I_V) (PLLO#1)	2.34	Amps	N/A	N/A
4	+28 V MLB operating power = $I_V \times V_b$ (PLLO#1)	63.4	Watts	82 W max	P
6	Average current (I_V) (PLLO#2)	2.96	Amps	N/A	N/A
7	+28 V MLB operating power = $I_V \times V_b$ (PLLO#2)	2.96 66.5	Watts	82 W max	P
+28 V MLB at 28 Volts					
9	+28 V MLB bus voltage at 28 V (V_b) (Measured)	28.01	Volts	28.0 ± 0.1	P
10	Average Current (I_V) (PLLO#1)	2.25	Amps	N/A	N/A
11	+28 V MLB operating power = $I_V \times V_b$ (PLLO#1)	63.0	Watts	82 W max	P
13	Average current (I_V) (PLLO#2)	2.36	Amps	N/A	N/A
14	+28 V MLB operating power = $I_V \times V_b$ (PLLO#2)	66.1	Watts	82 W max	P
+28 V MLB at 29 Volts					
16	+28 V MLB voltage at 29 V (V_b) (Measured)	29.06	Volts	29.0 ± 0.1	P
17	Average Current (I_V) (PLLO#1)	2.18	Amps	N/A	N/A
18	+28 V MLB operating power = $I_V \times V_b$ (PLLO#1)	63.3	Watts	82 W max	P
20	Average current (I_V) (PLLO#2)	2.30	Amps	N/A	N/A
21	+28 V MLB operating power = $I_V \times V_b$ (PLLO#2)	66.8	Watts	82 W max	P

Circle Test:



LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order:

74 8613

P/S/N:

10.9

Test Systems Engineer

Date

11-19-99

Customer Representative
(Flight Hardware Only)

Date

11-19-99

Quality Control

Date

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TEST DATA SHEET 4 (Sheet 1 of 2)
+28 Pulse Load Bus (Paragraph 3.2.4.2.2.1-3.2.4.2.2.6)

Paragraph	Parameter	Measured or Calculated	Required	Pass/ Fail
3.2.4.2.2.1	From -0.1 to two seconds			
	Peak Current = I_p	1.01 Amps	1.3 amps max	P.
3.2.4.2.2.2	From 2 to 4 seconds			
	Peak Current = I_p	1.02 Amps	1.3 amps max	P
3.2.4.2.2.3	From 4 to 6 seconds			
	Peak Current = I_p	1.02 Amps	1.3 amps max	P
3.2.4.2.2.4	From 6 to 8 seconds			
	Peak Current = I_p	1.03 Amps	1.3 amps max	P
3.2.4.2.2.5	Eight Sec. Integrated Current Measurement:			
	Current	105.7 mA	None	P
3.2.4.2.2.6	Turn-on Transient:			
	dI/dT	235.8 mA/ μ s	744 mA/ μ s *	P
	Peak Current = I_p	5.79 Amps	11.5 Amps	

* Refer to Figure 9.

Bus current during the I/H, D period

Paragraph	Parameter	Measured or Calculated	Pass/ Fail
3.2.4.2.2.1	From -0.1 to 2 secs	24.2 mA	N/A
3.2.4.2.2.2	From 2 to 4 secs	21.34 mA	N/A
3.2.4.2.2.3	From 4 to 6 secs	27.16 mA	N/A
3.2.4.2.2.5	From 6 to 8 secs	17.45 mA	N/A

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

S/N: 1097

Test Systems Engineer

11-18-99
Date



11-19-99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 4 (Sheet 2 of 2)
+28 Pulse Load Bus (Paragraph 3.2.4.2.2.7)

Bus current during warm cal, cold cal, & Nadir

Paragraph	Parameter	Measured or Calculated	Pass/ Fail
3.2.4.2.2.7 (2)	Warm cal	12.01 mA	N/A
3.2.4.2.2.7 (3)	Cold cal	12.7 mA	N/A
3.2.4.2.2.7 (4)	Nadir	19.4 mA	N/A
3.2.4.2.2.7 (5)	Warm cal (motors off)	0.002 mA	N/A

Circle Test:



LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order:

748613

SN:

109

Test Systems Engineer

11-18-99
Date



11-19-99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

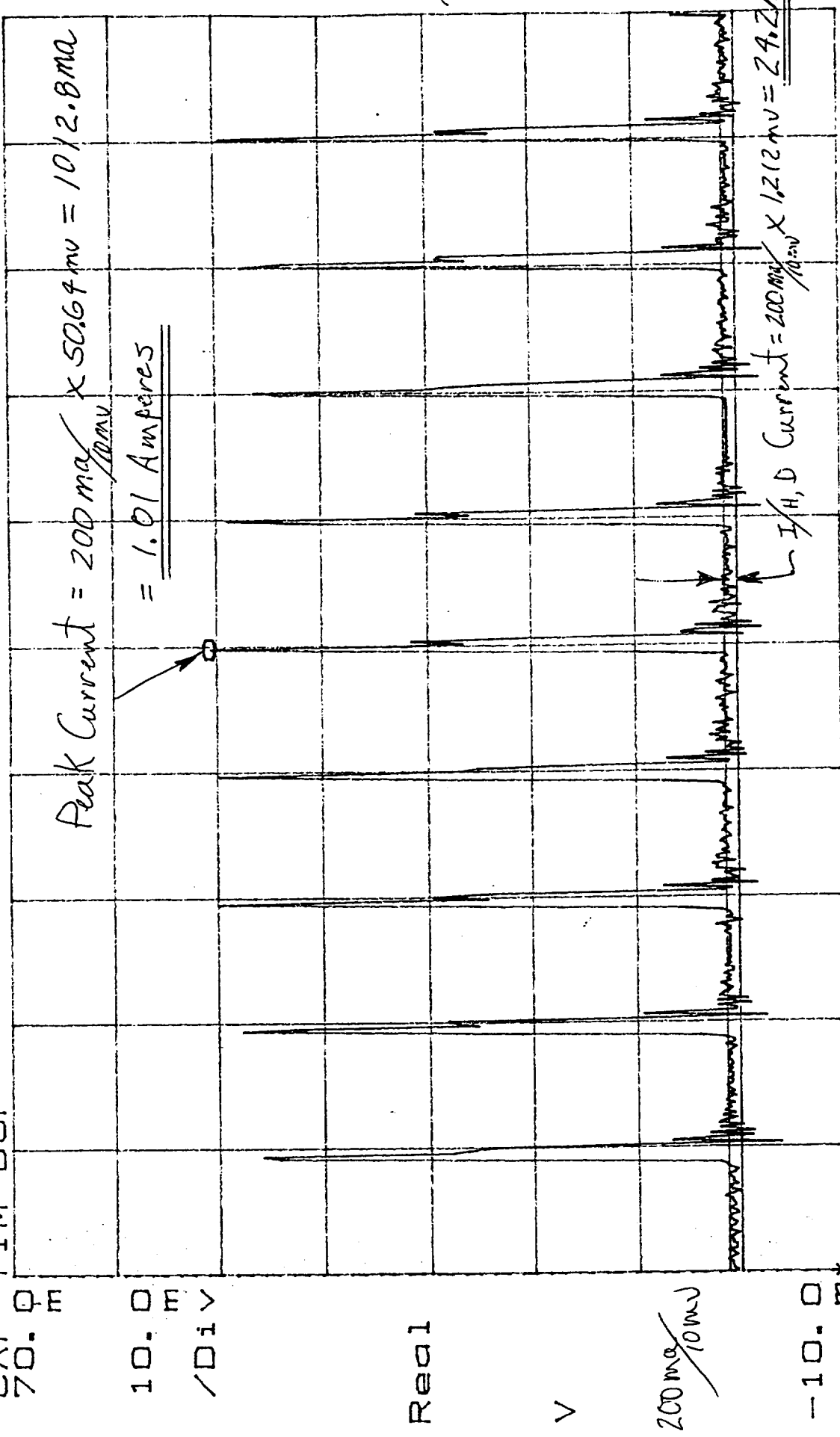
Date

NOV 19 99

Y=36.3626 μ $\Delta Y=1.212mV$

X=996.1mSec
Y=50.6428mV

CAP TIM BUF



FXDXY 0.0 2.0

S/O: 748613 OP: 0810 1ST CPT TDS-4
 P/N: 1331720-3-II SN: 109 324.2.2.1 0-2 Sec PLB Current
 TEST ENG: [Signature] DATE: 11-19-99
 QUALITY: [Signature]

X=3.4258 Sec
Y=51.015mV

Y=36.3626μ ΔY=1.067mV

CAP TIM BUF

70.0 m

10.0 m

/Div

Real

V

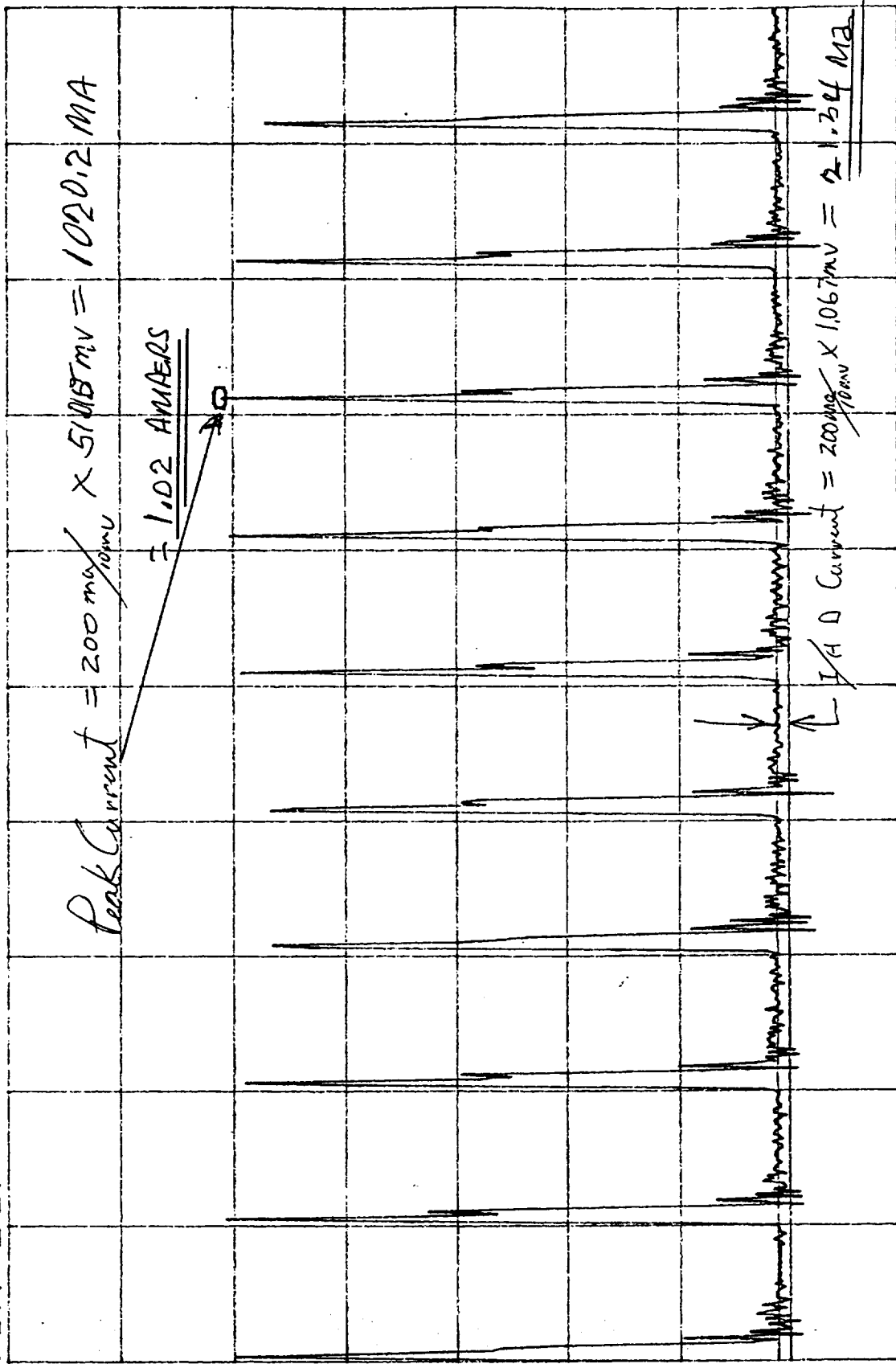
200mV/10mV

-10.0 m

FxdXY 2.0

Sec

4.0



36: 748613 OP: 0810
P/N: 1331720-3-II SN: 109

1ST CPT 32.4.2.2.2

PLB Current 2-4 Sec
TOS-4

TEST ENG: Ray [Signature] DATE: 11-19-99
QUALITY: 1 (200)

X=4.6406 Sec
Y=51.0862mV

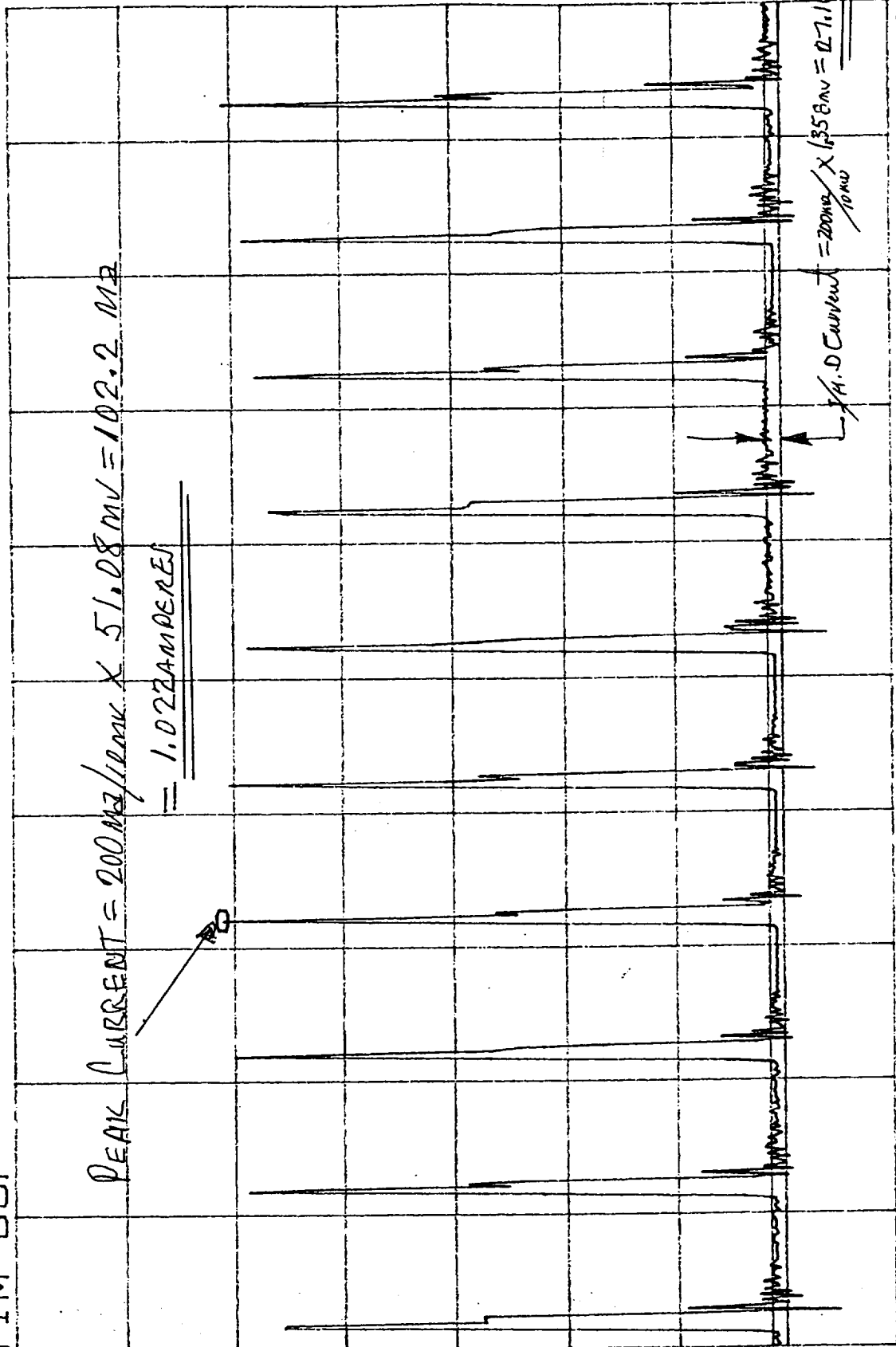
Y=36.3626μ ΔY=1.358mV

CAP TIM BUF

70.0 m

PEAK CURRENT = $200 \text{ mV} / 10 \text{ mV} \times 51.08 \text{ mV} = 102.2 \text{ mV}$
= 1.022 AMPERES

10.0 m
/Div



Real

V

200mV/10mV

-10.0 m

FxdXY 4.0

Sec

6.0

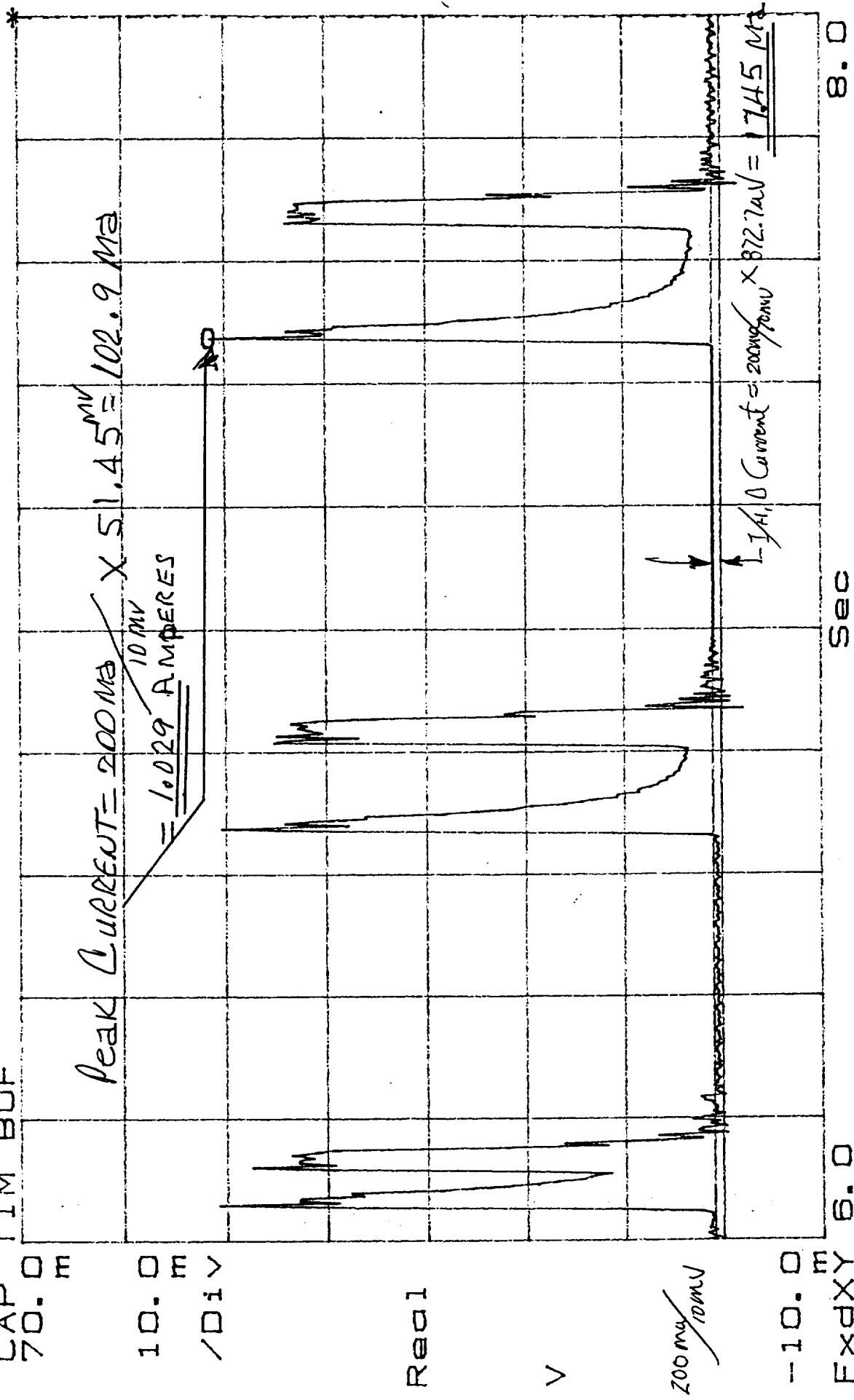
PLB Current

4-6 Sec
TDS-A

9/0: 748613 OP: 0810 1ST CPT 324.22.3
P/N: 1331720-3-IT SN: 102
TEST ENG: Capitol DATE: 11-18-99
QUALITY: 100%

X=7.4766 Sec
 Y=51.4551mV
 Y=36.3626μ ΔY=872.7μV

CAP TIM BUF
 70.0 m



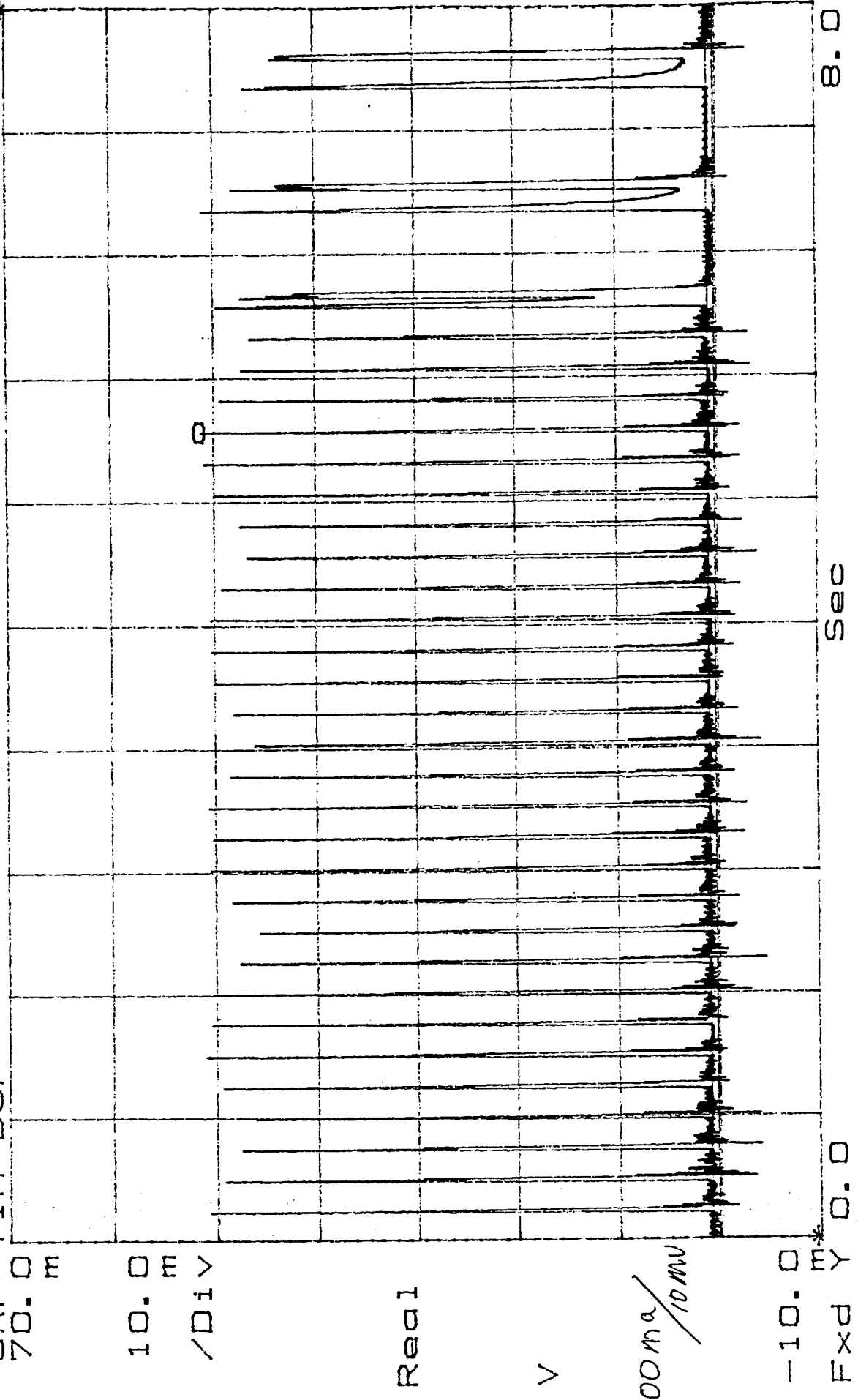
910: 748613 OP: 0810 1ST CPT PLB Current
 P/N: 1331720-3-IT SN: 109 329.2.2.4 6-8 Sec
 TDS-4

TEST ENG: Ray B. B. B. DATE: 11-19-88
 QUALITY: (V2)

Y=957.575 μ Δ Y=727.3 μ V

X=5.25 Sec
Yd=51.3289mV

CAP TIM BUF



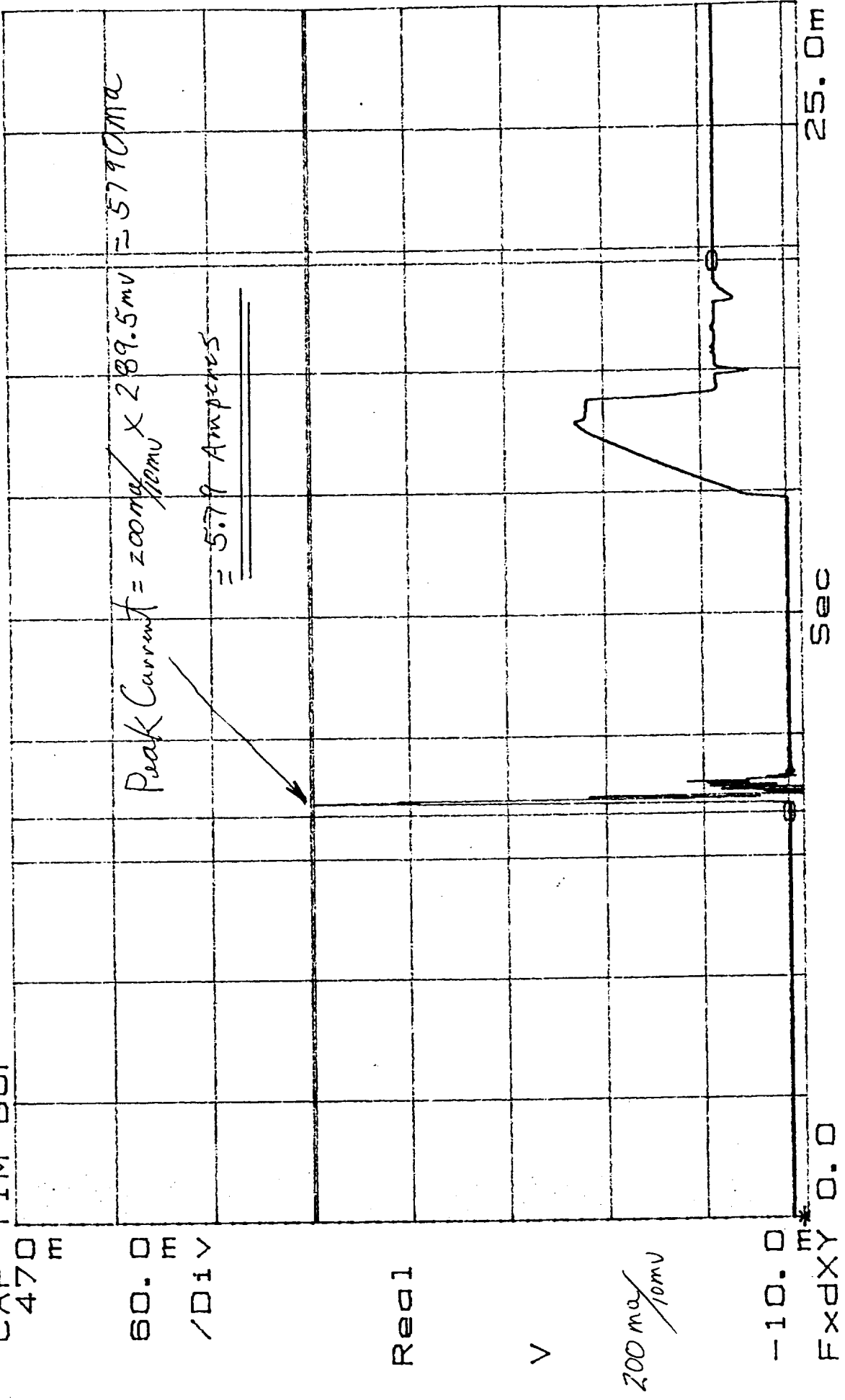
910: 748613 OP: 0810 1ST CPT 32.4.2.5. Eight Sec Current
PN: 1331720-3-II SN: 102
TEST ENG: Ray Hughes DATE: 11-19-99
QUALITY: (200/24)

M=CAP TIM REC

9/0: 748613 OA: 0810
P/N: 1331720-3-II SN: 102
1ST CPT 3.2A.2.2.5 8 Sec Ave Current
TEST ENG: Ray [Signature] DATE: 11-19-99
QUALITY: (11202) (11202)

$X=8.391\text{ms}$ $\Delta X=11.34\text{ms}$ $Y=288.473\text{m}$ $\Delta Y=289.5\text{mV}$
 $Y_0=-1.8463\text{m}$ $\Delta Y_0=43.54\text{mV}$

CAP TIM BUF



S/O: 748613 OP: 0810 1st CPT PLB TURN-ON TRANSIENT TEST ENG: [Signature] DATE: 11-19-99
 P/N: 1331720-3-II SN: 109 324.2.2.6 TDS-4 QUALITY: [Signature]

$X=8.625\text{ms}$ $\Delta X=15.62\mu\text{s}$ $Y=288.473\text{m}$ $\Delta Y=289.5\text{mV}$
 $Y_0=103.958\text{m}$ $\Delta Y_0=184.2\text{mV}$

CAP TIM BUF

470 m

60.0 m

/DIV

Real

V

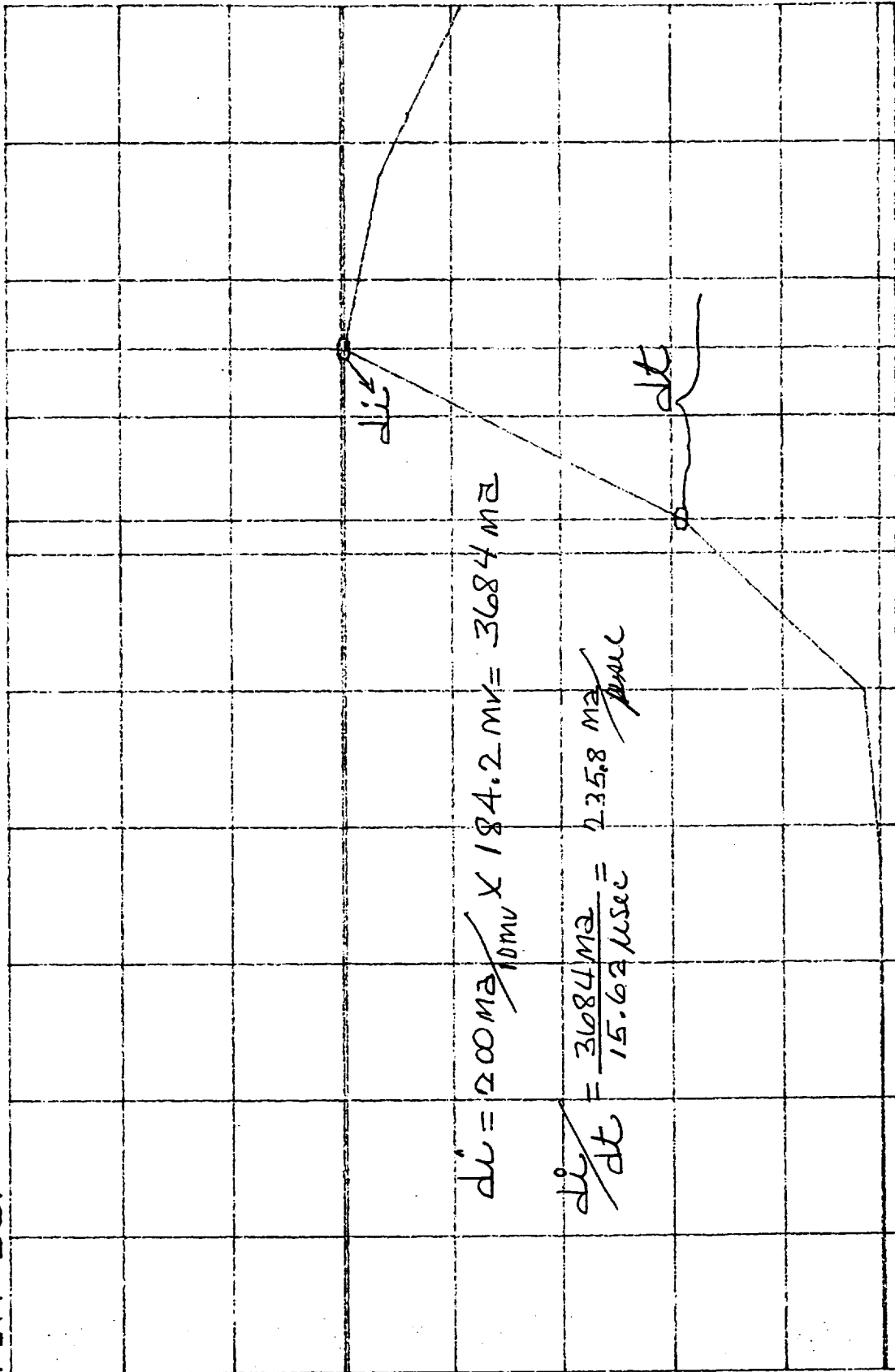
200mA/10mV

-10.0 m

FxdXY 8.55m

Sec

8.67m



TDS-4

1ST CPT

PLB di/dt

96: 748613

OP: 0810

P/N: 1331720-3-IT

SN: 109

32422.6

TEST ENG: Ray Campbell DATE: 11-19-99

QUALITY: 1

2A 200

TEST DATA SHEET 5
+28 V Analog Telemetry Bus (Paragraph 3.2.4.2.3)

Step	Parameter	Measured/ Calculated	Required	Pass/ Fail
3	+28 V ATB Bus Voltage (V_{at}) (Measured)	<u>28.02</u> Volts	28.0 \pm 0.5	P
4	Av. Current (I_a)	<u>1.78</u> mA	7 mA max	P
5	+28 V ATB Operating Power = $I_a \times V_{at}$	<u>49.8</u> mW	200 mW max	P

Circle Test:

1 ST
CPT

LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

S/N: 109

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 6
+10 V Interface Bus Voltage (Paragraph 3.2.4.2.4)

Step	Parameter	Measured/ Calculated	Required	Pass/ Fail
3	Av. Current (I_a)	<u>7.6</u> mA	10 mA max	P
3	+10 V Interface Bus (V_{ib}) (Measured)	<u>9.03</u> Volts	9.0 ± 1.0 V	P
4	+10 V Interface Bus Power = $I_a \times V_{ib}$	<u>68.6</u> mW	100 mW max	P

Circle Test:



LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order:

748613

S/N:

109

Test Systems Engineer

Date

11-17-99



11-19-99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

11/18/99

TEST DATA SHEET 7
Power Input Test for LPT (Paragraph 3.2.4.2.5)

Step	Parameter	Measured	Units	Required	Pass/ Fail
3	+28 V MLB Voltage (Vb) (Measured at connector J1)		Volts	28 \pm 0.5	
3	Current		Amps	Between 0.5 and 4.3 Amps	

N
R



11/28/99

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 8
1.248 MHz Clock Signal Verification (Paragraph 3.2.4.3.2.1)

1.248 CLOCK SIGNAL
ATTACH PHOTOGRAPH OR PLOT HERE

Step	Parameter	Measured/ Calculated	Required	Pass/ Fail
5	Clock Frequency	1.2479 MHz	1.248 \pm 10%	P
	Clock Amplitude	9.80 Volts	9.0 \pm 1.0 V	P

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109

R. Hair
Test Systems Engineer

11/19/99
Date



NOV 19 99

Customer Representative
(light Hardware Only)

Date



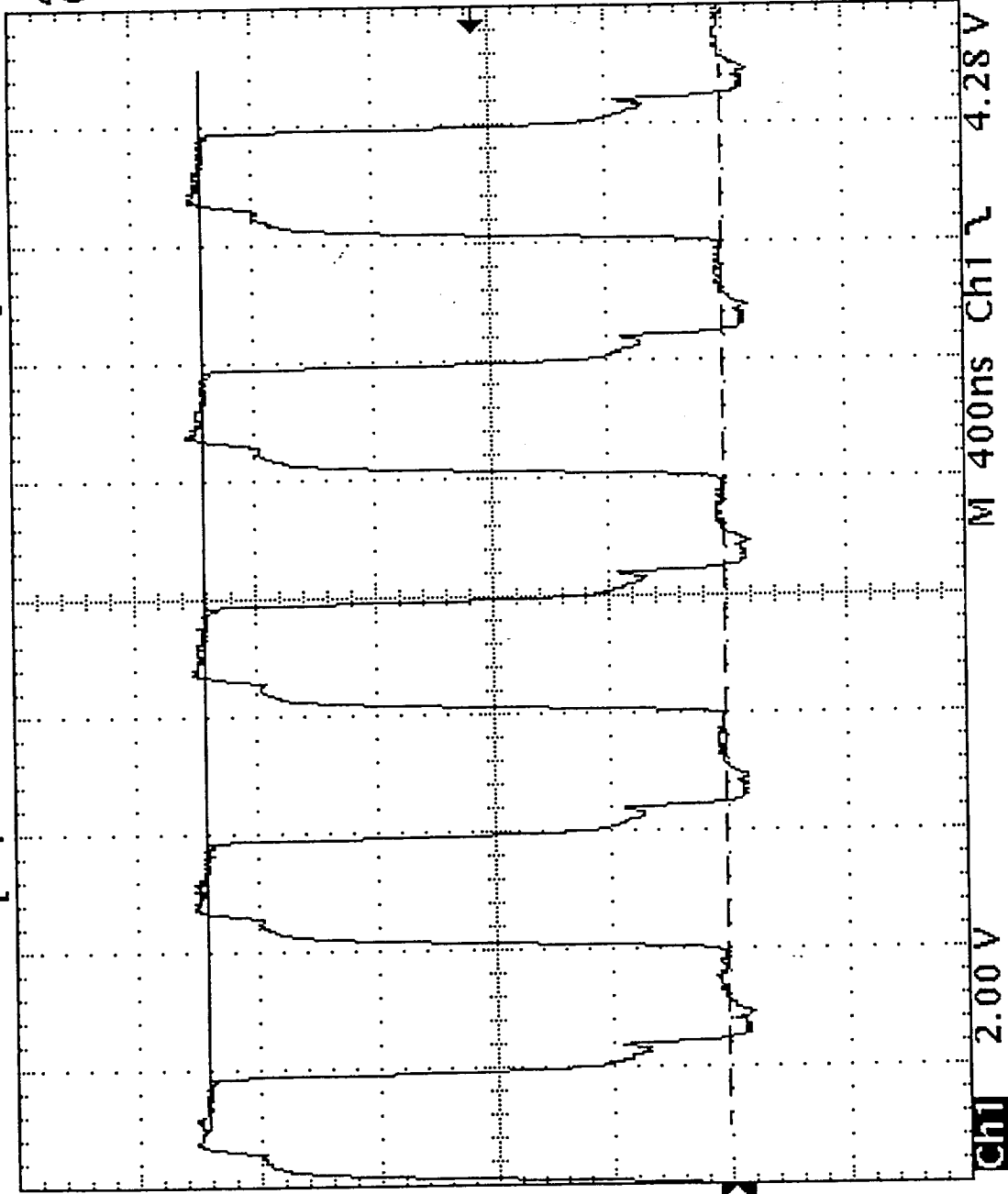
11/19/99
Quality Control

Date

Tek Run: 250MS/s

Tek Run: 250MS/s

[.....]



Δ@: 8.84 V
8.80 V

Ch1 Freq
1.24793MHz

19 Nov 1999

18:23:37

324.3.2.1

805

139/T

TEST ENG:

DATE: 11/19/99

53/61/11 (2A) : H.L.I.V.M. (200)

5/6: 748613

ΔP: 0810

P/N: 1331720-3-11

1st CPT

—

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TEST DATA SHEET 9
"C1" Shift Pulse Verification (Paragraph 3.2.4.3.2.2)

"C1" SHIFT PULSE
Attach Photograph OR Plot Here

Parameter	Measured/ Calculated	Required	Pass/ Fail
Pulse Timing (A) *	47.9 μ s	48 μ s \pm 10%	P
Pulse Timing (B) *	12.16 μ s	12 μ s \pm 10%	P
Pulse Amplitude	8.68 Volts	9.0 \pm 1.0 V	P

* Refer to Figure 19 for location of the pulse timing A and B.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109

R. Haniel 11/19/99
Test Systems Engineer Date



NOV 19 99

Customer Representative
(Flight Hardware Only)

Date

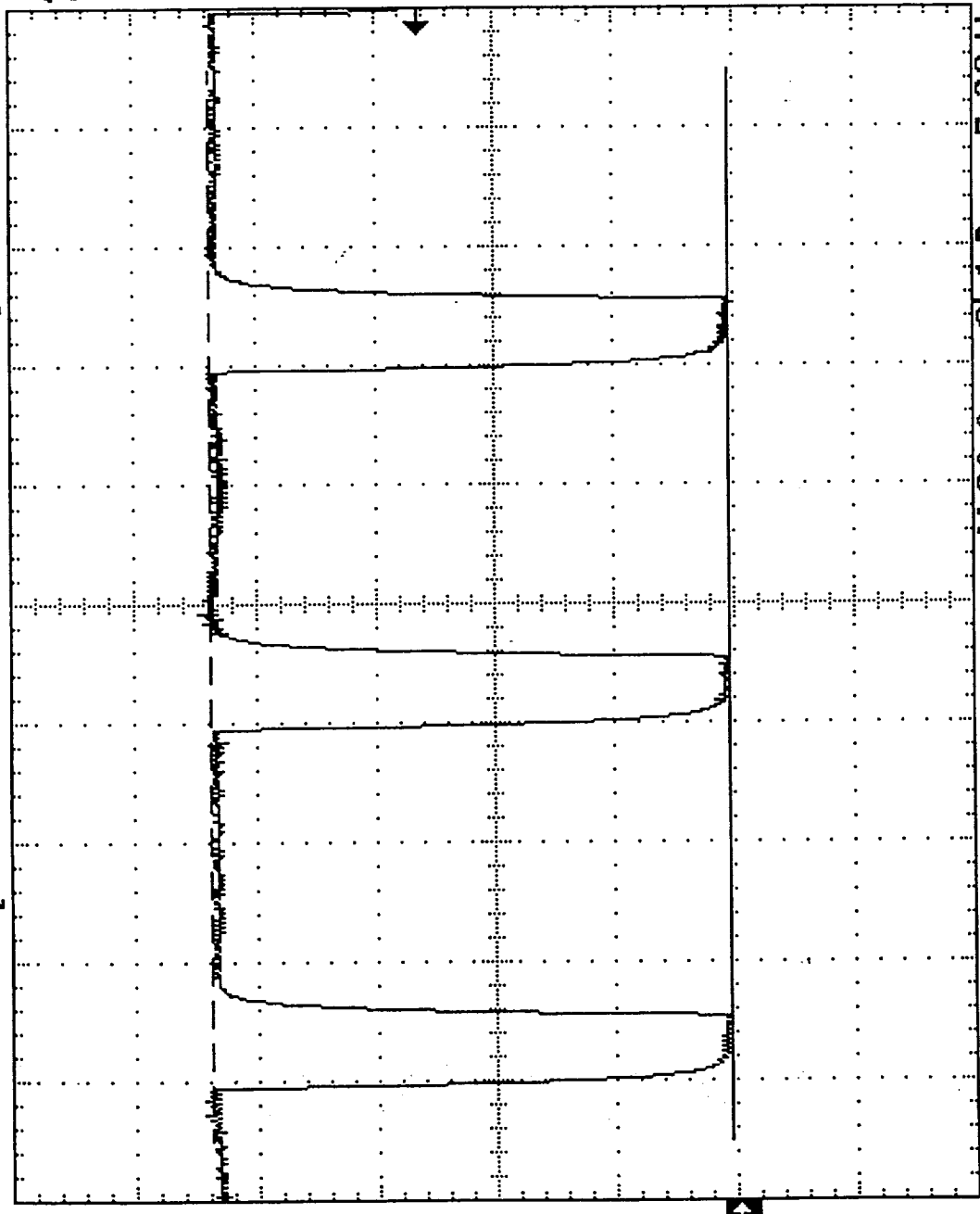
Test Systems Engineer



Quality Control

11/19/99
Date

Tek Stop: 5.00MS/s 2064 Acqs TDS 9



Δ: 8.68 V
@: 80mV

Ch1 +width
47.94μs

Ch1 -width
12.16μs

19 Nov 1999
18:36:33

'c1
SHIFT
PULSE

3.2.4.3.2.2
TDS 9

S/O: 748613 OP: 0810 1ST CPT
 P/N: 1331720-3-IT SN: 109
 ()
 TEST ENG: L. H. S. DATE: 11/19/99
 QUALITY: (7A) 11/19/99

TEST DATA SHEET 10
"A1" Select Pulse Verification (Paragraph 3.2.4.3.2.3)

"A1" SELECT PULSE
Attach Photograph or Plot Here

Parameter	Measured/ Calculated	Required	Pass/ Fail
Select Pulse Timing (F) *	960 μ s	961.5 μ s \pm 10%	P
Select Pulse Amplitude	8.64 Volts	9.0 \pm 1.0 V	P

* Refer to Figure 13 for location of the pulse timing F

Circle Test: ☒ CPT ☐ LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109

R. Haid 11/19/99
Test Systems Engineer Date



NOV 19 '99

Customer Representative
(Flight Hardware Only)

Date



Quality Control

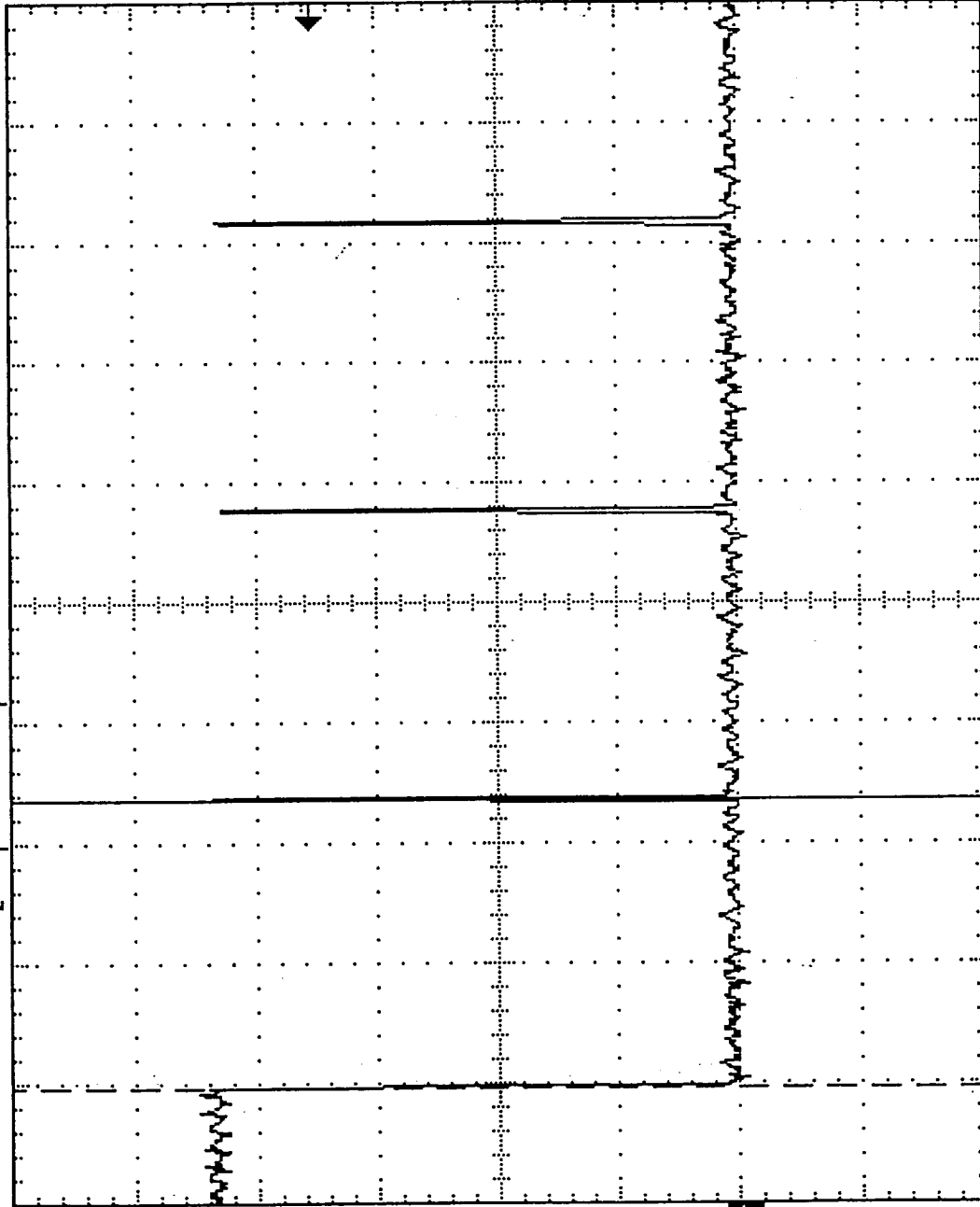
11/19/99

Date

Tek Stop: 250kS/s

17 Acqs

TDS10



Δ: 960µs
@: 944µs

Ch1 Period
963.2µs

Ch1 High
8.64 V

19 Nov 1999

18:44:02

3.2.4.3.2.3
CLOCK FREQ. AND AMP.

1ST CPT TDS 10

OP: 0810
SN: 102

P/N: 1331720-3-II

TEST ENG: L. Hall DATE: 11/18/99
QUALITY: (002) 11/18/99

, A1
SELECT
PULSE

TEST DATA SHEET 11
"8 Seconds" Frame Sync Pulse (Paragraph 3.2.4.3.2.4)

"8 SECONDS" FRAME SYNC PULSE
Attach Photograph or Plot Here
(Record of "C" timing only is required)

Step	Parameter	Measured/ Calculated	Required	Pass/ Fail
1*	Frame Sync Pulse Timing (G)*	8.0 Sec	8 Sec $\pm 10\%$	P
	Frame Sync Pulse Timing (C)*	240.6 μ s	240.4 μ s $\pm 10\%$	P
	Frame Sync Pulse Amplitude	8.64 Volts	9.0 ± 1.0 V	P

* Refer to Figure 13 for location of the timing pulses for G and C.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 74863 S/N: 109



11/19/99

Test Systems Engineer

Date



NOV 19 99



11/19/99

Customer Representative
(Flight Hardware Only)

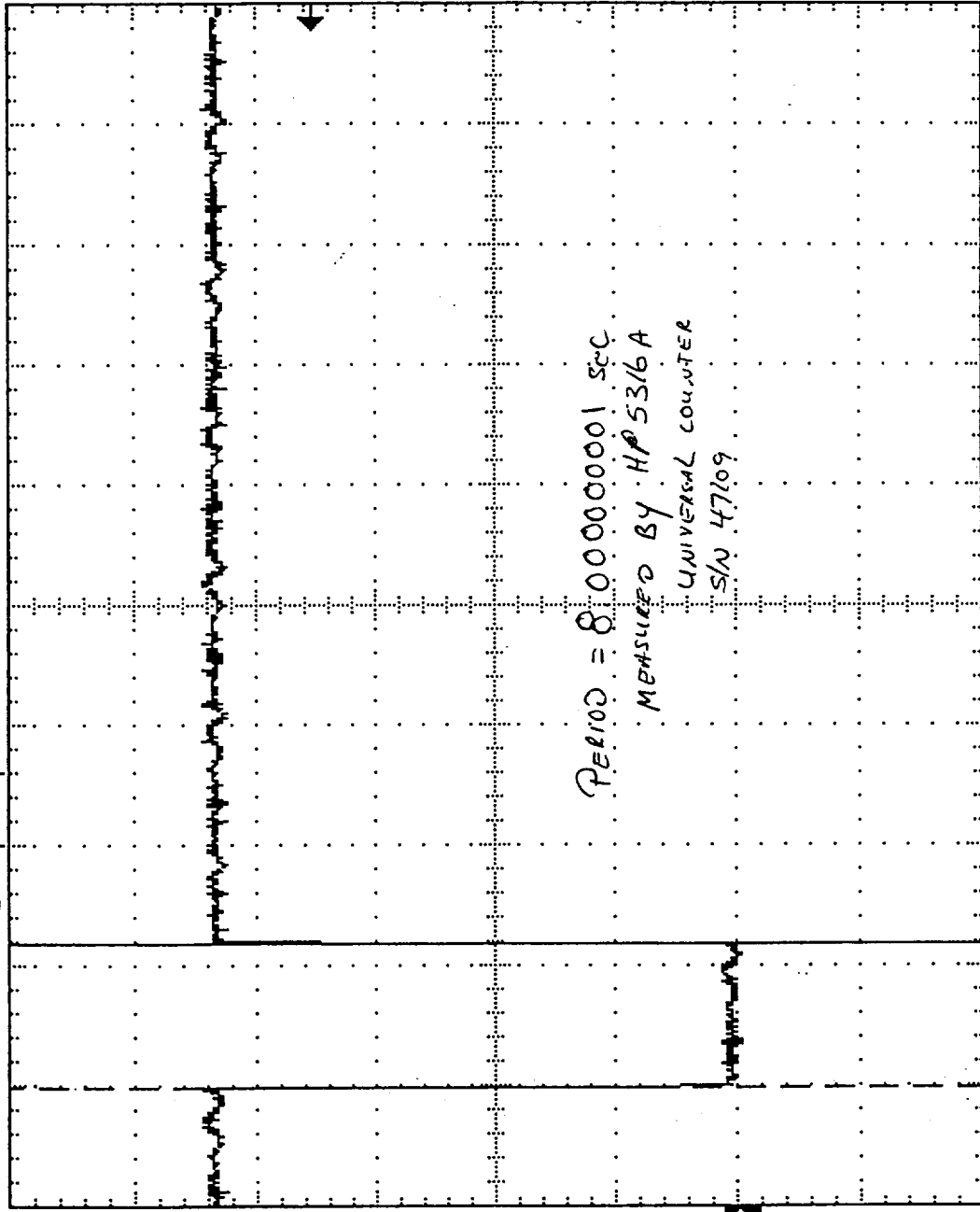
Date

Quality Control

Date

Tek Run: 500kS/s Sample **Trig**

TDS II



8 sec
FRAME
SYNC
PULSE

19 Nov 1999
18:50:05

M 200µs Ch1 7.08 V

3.24.3.2.4

TDS II

1ST CPT

Sl: 748613 OA: 0810 SN: 109
PN: 1331720-3-IT

TEST ENG: R. Hargrave DATE: 11/19/99
QUALITY: (7A) 11/19/99

6 Apr 99

TEST DATA SHEET 12 (Sheet 1 of 2)
Synchronization Signals Relationship (Paragraph 3.2.4.3.2.5)

A1 Select pulse and the 8 seconds Frame sync pulse.

ATTACH PHOTOGRAPH OR PLOT HERE

Verify that the sync pulse between H and C is as shown in Figure 19.

TIME MEASURED: 1.2 msTIME REQUIRED: 1.2 ms $\pm 10\%$ PASS/FAIL PCircle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 10911/19/99

Test Systems Engineer

Date

11/19/99

Quality Control

Date

Customer Representative
(Flight Hardware Only)

Date

NOV 19 99

TEST DATA SHEET 12 (Sheet 2 of 2)
Synchronization Signals Relationship (Paragraph 3.2.4.3.2.5)

A1 Select pulse and the C1 Shift pulse.

ATTACH PHOTOGRAPH OR PLOT HERE

Verify that the sync pulse between I and E is as shown in Figure 19.

TIME MEASURED: 24.45

TIME REQUIRED: $24 \mu s \pm 1 \mu s$

PASS/FAIL P

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109



11/19/99

Test Systems Engineer

Date



NOV 19 99

Customer Representative
(Flight Hardware Only)

Date



Quality Control

11/19/99

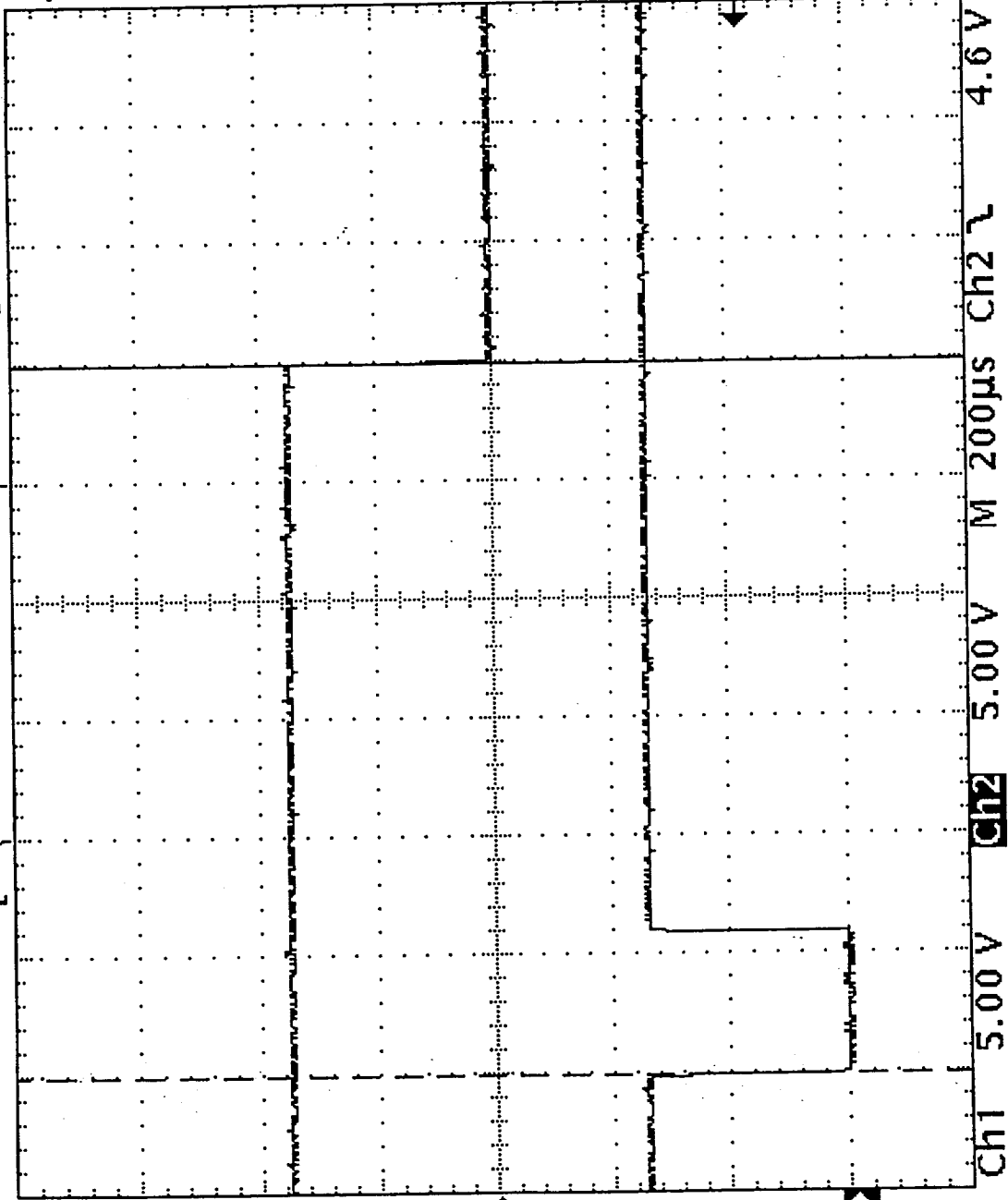
Date

TDS 12 SHEET (1 of 2)

9 Acqs

Tek STOP 500ks/s

Δ : 1.200ms
@: 1.196ms



A1
SELECT

8 sec
SYNC

19 Nov 1999

19:02:57

3.2.4.3.2.5

TDS 12 (SHEET 10 of 2)

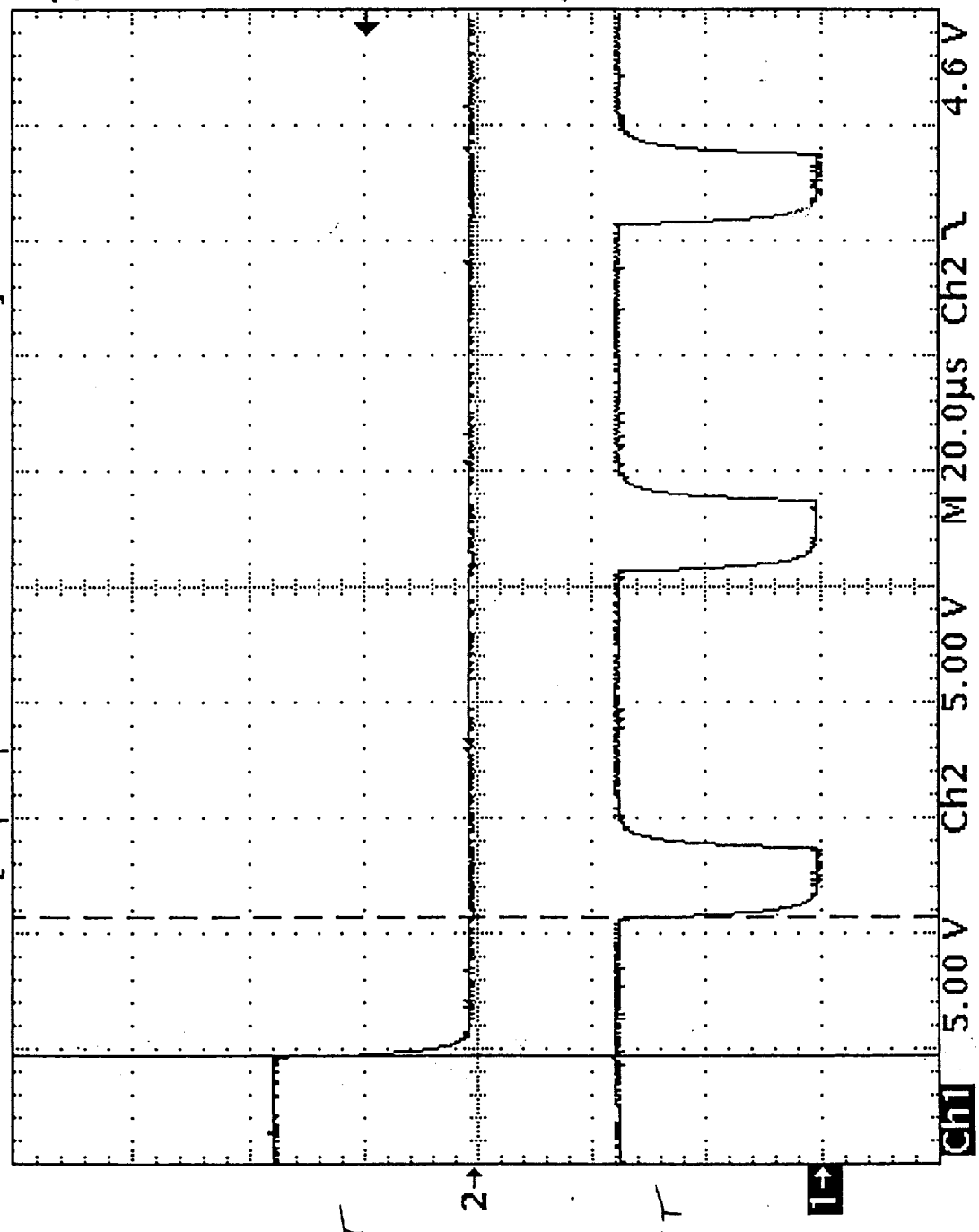
1ST CPT

IO: 748613 OP: 0810
N: 131720-3-IT SN: 109

TEST ENG: R. Hain DATE: 11/19/99
QUALITY: (300) 11/19/99

Tek Stop 5.00MS/s 6 Acqs TDS 12 SHEET (20F2)

Δ: 24.0μs
@: -1.2μs



19 NOV 1999
19:07:07

3.2.4.3.2.5
TDS 12 (SHEET 20F2)

IO: 748613 OP: 0810 1ST CPT
N: 1331720-3-II SN: 102
TEST ENG: R. Hall DATE: 11/19/99
QUALITY: (7A) 11/19/99

TEST DATA SHEET 13
Synchronization Signals Relationship (Paragraph 3.2.4.3.2.5)

A1 Select pulse and the 1.248 MHz clock.

ATTACH PHOTOGRAPH OR PLOT HERE

Verify that the sync pulse between I and J is as shown in Figure 19.

PASS/FAIL P

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 SN: 109



11/19/99

Test Systems Engineer

Date



NOV 19 99

Customer Representative
(Flight Hardware Only)

Date



11/19/99

Quality Control

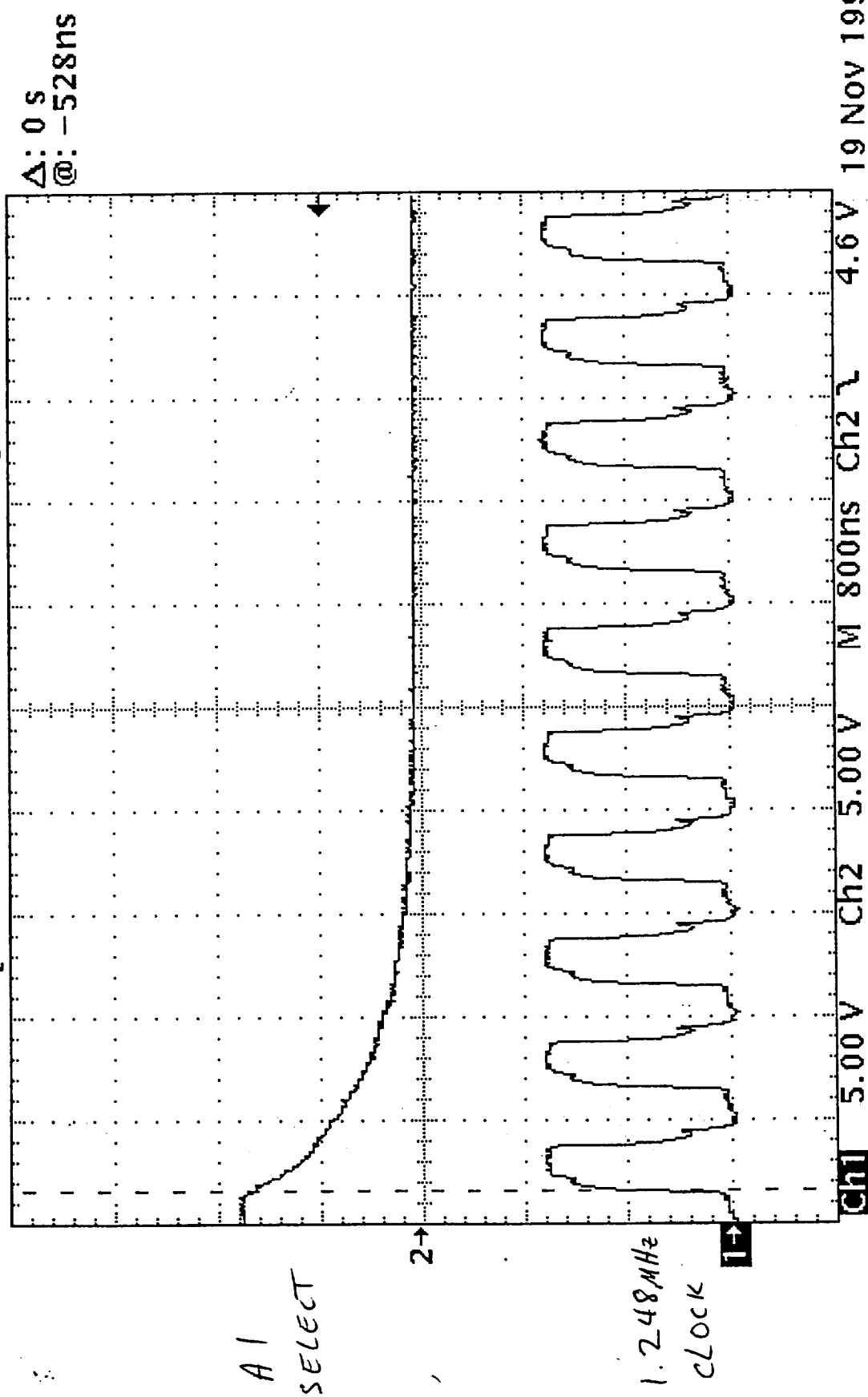
Date

TDS13

16 Acqs

Tek Stop: 125MS/s

[+T]



3.2.4. 3.2.5

TDS 13

1ST CPT

VO: 748613 OP: 0810 SN: 109

N: 1331720-3-IT

TEST ENG: R. H. J. DATE: 11/19/99
QUALITY: 11/19/99

TEST DATA SHEET 14

Commands and Digital-B Telemetry Verification (Paragraphs 3.2.4.3.3.1, 3.2.4.3.3.2, 3.2.4.3.3.3, and 3.2.4.3.3.4)

Test	Digital-B Commands Verification Via STE			Visual Inspection		Pass/Fail
	Command	Observed	Required	Observed	Required	
3.2.4.3.3.1 Module Totally Off	Scanner A1-1	OFF	OFF	WARM LOAD	Antenna pointing to warm load.	P
	Scanner A1-2	OFF	OFF	WARM LOAD	Antenna pointing to warm load.	P
	Module Power		Disconnect	N/A	N/A	
	Survival Htr. Power.	OFF	OFF	O	28 V supply current=0	P
3.2.4.3.3.2 Survival Heater Power	Survival Heater ON	ON	ON	N/A	N/A	P
	Survival Heater OFF	OFF	OFF	N/A	N/A	P
3.2.4.3.3.3 Module Power Connect	Module Power	CONNECT	Connect	2.4A	+28 V DC current is between 0.5 and 3.2 amps.	P
3.2.4.3.3.4 PLL Power	PLLO#2	ON	PLLO#2	N/A	N/A	P
	PLLO#1	ON	PLLO#1	N/A	N/A	P

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 SN: 109

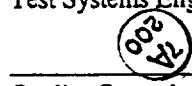
R. Hine 11/19/99
Test Systems Engineer Date



NOV 19 99

Customer Representative
(Flight Hardware Only)

Date



Quality Control

11/19/99
Date

TEST DATA SHEET 15
Scanner Commands Verification (Paragraph 3.2.4.3.3.5, Step 1)

Test	Digital "B" Verification			Pass/Fail
	Command	Observed	Required	
Full Scan	1 Module Power	CONNECT	CONNECT	P ↓
	2 Survival Heater	OFF	OFF	
	3 Scanner A1 Power	ON	ON	
	4 Scanner A2 Power	ON	ON	
	5 Antenna Warm Cal Pos.	NO	NO	
	6 Antenna Cold Cal Pos.	NO	NO	
	7 Antenna NADIR Position	NO	NO	
	8 Antenna Full Scan	YES	YES	
	9 PLL Power	#1	PLL#1	
	10 Cold MSB	0	0	
	11 Cold LSB	0	0	

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

S/N: 109

R. Hill
Test Systems Engineer

Date



NOV 19 99

Customer Representative
(Flight Hardware Only)

Date



Quality Control

Date

TEST DATA SHEET 16
Scanner Commands Verification (Paragraph 3.2.4.3.3.5, Step 2)

Test	Digital "B" Verification			Pass/Fail
	Command	Observed	Required	
Full Scan	1 Module Power	CONNECT	CONNECT	P ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓ ↓
	2 Survival Heater	OFF	OFF	
	3 Scanner A1 Power	OFF	OFF	
	4 Scanner A2 Power	OFF	OFF	
	5 Antenna Warm Cal Pos.	NA	NO	
	6 Antenna Cold Cal Pos.	NO	NO	
	7 Antenna NADIR Position	NO	NO	
	8 Antenna Full Scan	YES	YES	
	9 PLL Power	#1	PLLO#1	
	10 Cold MSB	0	0	
	11 Cold LSB	0	0	

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 648613

S/N: 109

K. Haight
Test Systems Engineer

Date



NOV 19 99

Customer Representative
(Flight Hardware Only)

Date



Quality Control

Date

6 Apr 99

TEST DATA SHEET 17
 Scanner Commands Verification (Paragraph 3.2.4.3.3.5, Step 3)

Test	Digital "B" Verification			Pass/Fail
	Command	Observed	Required	
Full Scan	1 Module Power	CONNECT	CONNECT	P
	2 Survival Heater	OFF	OFF	
	3 Scanner A1 Power	ON	ON	
	4 Scanner A2 Power	ON	ON	
	5 Antenna Warm Cal Pos.	NO	NO	
	6 Antenna Cold Cal Pos.	NO	NO	
	7 Antenna NADIR Position	NO	NO	
	8 Antenna Full Scan	YES	YES	
	9 PLL Power	#1	PLLO#1	
	10 Cold MSB	0	0	
	11 Cold LSB	0	0	

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613S/N: 109R. Hain
Test Systems Engineer

Date



NOV 19 99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

6 Apr 99

TEST DATA SHEET 18
Scanner Positions Commands (Paragraph 3.2.4.3.3.6)

Test	Digital "B" Verification			Pass/Fail
	Step/Description		Observed	Required
Scanner Position Commands	1-Warm Cal.		YES	YES
	2-Cold Cal.	MSB	0	0
	Pos.	LSB	1	1
	3-Cold Cal.	MSB	1	1
	Pos.	LSB	0	0
	4-Cold Cal.	MSB	1	1
	Pos.	LSB	1	1
	5-Cold Cal.	MSB	0	0
	Pos.	LSB	0	0
	6-NADIR		YES	YES
	7-Warm Cal		YES	YES

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613S/N: 109
K. Hight
Test Systems Engineer

Date

11/12/99

NOV 19 99

002
7A
11/19/99
Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 19
Digital-A Data Output Full Scan Mode Synch Sequence,
Unit I.D./Serial Number and Digital-B Serial Data Verification
Sections [I], [II], and [III] (Paragraph 3.2.4.3.4.1)

Step	Element (For Ref)	Description	Recorded Value	Required Value	Pass/Fail																														
[I]	0001	Sync Sequence Byte 1	255	255	P																														
	0002	Sync Sequence Byte 2	255	255																															
	0003	Sync Sequence Byte 3	255	255																															
[II]	0004	Unit I.D. and Serial N	33	*																															
[III]	0005	Digital-B Data Byte 1	2	2	↓																														
	0006	Digital-B Data Byte 2	14	**																															
	0007	Digital-B Data Byte 3	0	0																															
	0008	Digital-B Data Byte 4	0	0																															
<p>* AMSU A1 Identification Words (data entered in decimal system)</p> <table> <thead> <tr> <th></th> <th>Binary</th> <th>Decimal</th> </tr> </thead> <tbody> <tr><td>AMSU-A1 S/N 101</td><td>00000001</td><td>1</td></tr> <tr><td>AMSU-A1 S/N 102</td><td>00000101</td><td>5</td></tr> <tr><td>AMSU-A1 S/N 103</td><td>00001001</td><td>9</td></tr> <tr><td>AMSU-A1 S/N 104</td><td>00001101</td><td>13</td></tr> <tr><td>AMSU-A1 S/N 105</td><td>00010001</td><td>17</td></tr> <tr><td>AMSU-A1 S/N 106</td><td>00010101</td><td>21</td></tr> <tr><td>AMSU-A1 S/N 107</td><td>00011001</td><td>25</td></tr> <tr><td>AMSU-A1 S/N 108</td><td>00011101</td><td>29</td></tr> <tr><td>AMSU-A1 S/N 109</td><td>00100001</td><td>33</td></tr> </tbody> </table>							Binary	Decimal	AMSU-A1 S/N 101	00000001	1	AMSU-A1 S/N 102	00000101	5	AMSU-A1 S/N 103	00001001	9	AMSU-A1 S/N 104	00001101	13	AMSU-A1 S/N 105	00010001	17	AMSU-A1 S/N 106	00010101	21	AMSU-A1 S/N 107	00011001	25	AMSU-A1 S/N 108	00011101	29	AMSU-A1 S/N 109	00100001	33
	Binary	Decimal																																	
AMSU-A1 S/N 101	00000001	1																																	
AMSU-A1 S/N 102	00000101	5																																	
AMSU-A1 S/N 103	00001001	9																																	
AMSU-A1 S/N 104	00001101	13																																	
AMSU-A1 S/N 105	00010001	17																																	
AMSU-A1 S/N 106	00010101	21																																	
AMSU-A1 S/N 107	00011001	25																																	
AMSU-A1 S/N 108	00011101	29																																	
AMSU-A1 S/N 109	00100001	33																																	
<p>** Required value = 14 when PLLO #1 is active; and = 6 when PLLO #2 is active.</p>																																			
<p>Circle Test: <u>CPT</u> LPT</p>																																			
<p>METSAT/AMSU-A1 System P/N IS-1331720 Shop Order: <u>748613</u> SN: <u>109</u></p>																																			
<p align="right">R. Hail 11/19/99</p>																																			
<p align="right">Test Systems Engineer Date</p>																																			
<p align="center">NOV 19 99</p>																																			
<p align="right">002 11/19/99</p>																																			
<p>Customer Representative Date Quality Control Date</p> <p>(Flight Hardware Only)</p>																																			

1SU A1-33 A1.EXE FULL SCAN MODE P1 19-NOV-99 19:23:02 SCAN NUMBER 276

5] DIGITAL A DATA ELEMENT 0000

6] DIGITAL B DATA ELEMENT 00

7] ANALOG DATA ELEMENT 00

9] MODULE POWER = CONNECT COMMANDS
10] SURVIVAL HEATER POWER = OFF ANTENNA IN COLD CAL POSIT = NO [15]
11] MODULE TOTALLY OFF = ON ANTENNA IN NADIR POSITION = NO [16]
12] SCANNER A1 - 1 POWER = ON ANTENNA IN FULL SCAN MODE = YES [17]
13] SCANNER A1 - 2 POWER = ON PLL POWER = PLL0 # 1 [18]
14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION MSB = ZERO [19]
COLD CAL POSITION LSB = ZERO [20]
POWER [4] ON PRINT [3] FULL [1] RETURN
SCREEN ONLY [2]

3SELECT TOUCHSCREEN BUTTON 3

TDS 19

NO: 748613 OP: 0810 1ST CPT
IN: 1331720-3-II SN: 109

TEST ENG: R. Hoyle DATE: 11/19/99

—

—

—

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	11111111	572	SCENE DATA	16437
2	SYNC SEQUENCE	11111111	574	BP	16485
3	SYNC SEQUENCE	11111111	576	17	16050
4	UNIT ID AND SERIAL NO	00100001	578	CH 8	17418
5	DIGITAL B DATA	0000010	580	CH 9	17162
6	DIGITAL B DATA	0000110	582	CH 10	19987
7	DIGITAL B DATA	0000000	584	CH 11	17927
8	DIGITAL B DATA	0000000	586	CH 12	14931
10	REFLECTOR 1 POSITION	16225	588	CH 13	2597
12	REFLECTOR 2 POSITION	16225	590	CH 14	2416
14	REFL 1 POS	16225	592	CH 15	2601
16	REFL 2 POS	16210	594	REFLECTOR 1 POSITION	2419
18	SCENE DATA	16374	596	REFLECTOR 2 POSITION	16204
20	BP	17470	598	REFL 1 POS	16378
22	CH 3	16819	600	REFL 2 POS	17476
24	CH 4	16649	602	SCENE DATA	16663
26	CH 5	16443	604	BP	16444
28	CH 6	16480	606	18	16480
30	CH 7	16025	608	20	16025
32	CH 8	17416	610	22	17425
34	CH 9	17162	612	24	17146
36	CH 10	19969	614	26	19970
38	CH 11	17931	616	28	17937
40	CH 12	14926	618	30	17931
42	CH 13	167	620	32	2748
44	CH 14	16373	622	34	2569
46	CH 15	174	624	36	2753
48	REFLECTOR 1 POSITION	16376	626	38	2571
50	REFLECTOR 2 POSITION	16218	630	40	16198
52	REFL 1 POS	16371	632	42	16364
54	REFL 2 POS	17466	634	44	17462
56	SCENE DATA	16821	636	46	16819
58	BP	16652	638	48	16655
60	CH 3	16433	640	50	16425
62	CH 4	16478	642	52	16480
64	CH 5	16025	644	54	16027
66	CH 6	17408	646	56	17415
68	CH 7	17165	648	58	17160
70	CH 8	19970	650	60	19974
72	CH 9	17931	652	62	17927
74	CH 10	14925	654	64	14926
76	CH 11	323	656	66	2899
78	CH 12	143	658	68	2718
80	CH 13	326	660	70	2904
82	CH 14	148	662	72	2723
84	CH 15	16193	664	74	16200
86	REFLECTOR 1 POSITION	16366	666	76	16365
88	REFLECTOR 2 POSITION	17458	668	78	17458
90	REFL 1 POS	16820	670	80	16819
92	REFL 2 POS			82	
	SCENE DATA			84	
	BP			86	
	CH 3			88	
	CH 4			90	
	CH 5				
	CH 6				
	CH 7				
	CH 8				
	CH 9				
	CH 10				
	CH 11				
	CH 12				
	CH 13				
	CH 14				
	CH 15				
	REFLECTOR 1 POSITION				
	REFLECTOR 2 POSITION				
	REFL 1 POS				
	REFL 2 POS				
	SCENE DATA				
	BP				
	CH 3				
	CH 4				
	CH 5				
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	CH 11				
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	REFLECTOR 1 POSITION				
	REFLECTOR 2 POSITION				
	REFL 1 POS				
	REFL 2 POS				
	SCENE DATA				
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	REFLECTOR 2 POSITION				
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	BP				
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	CH 7				
	CH 8				
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	CH 11				
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	CH 14				
	CH 15				
	REFLECTOR 1 POSITION				
	REFLECTOR 2 POSITION				
	REFL 1 POS				
	REFL 2 POS				
	SCENE DATA				
	BP				
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	CH 4				
	CH 5				
	CH 6				
	CH 7				
	CH 8				
	CH 9				
	CH 10				
	CH 11				
	CH 12				
	CH 13				
	CH 14				
	CH 15				
	REFLECTOR 1 POSITION				
	REFLECTOR 2 POSITION				
	REFL 1 POS				
	REFL 2 POS				
	SCENE DATA				
	BP				
	CH 3				
	CH 4				
	CH 5				
	CH 6				
	CH 7				
	CH 8				
	CH 9				
	CH 10				
	CH 11				
	CH 12				
	CH 13				
	CH 14				
	CH 15				
	REFLECTOR 1 POSITION				
	REFLECTOR 2 POSITION				
	REFL 1 POS				
	REFL 2 POS				
	SCENE DATA				
	BP				
	CH 3				
	CH 4				
	CH 5				
	CH 6				
	CH 7				
	CH 8				
	CH 9				
	CH 10				
	CH 11				
	CH 12				
	CH 13				
	CH 14				
	CH 15				
	REFLECTOR 1 POSITION				
	REFLECTOR 2 POSITION				
	REFL 1 POS				
	REFL 2 POS				
	SCENE DATA				
	BP				
	CH 3				
	CH 4				
	CH 5				
	CH 6				
	CH 7				
	CH 8				
	CH 9				
	CH 10				
	CH 11				
	CH 12				
	CH 13				
	CH 14				
	CH 15				
	REFLECTOR 1 POSITION				
	REFLECTOR 2 POSITION				
	REFL 1 POS				
	REFL 2 POS				
	SCENE DATA				
	BP				
	CH 3				
	CH 4				
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	CH 6				
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	CH 9				
	CH 10				
	CH 11				
	CH 12				
	CH 13				
	CH 14				
	CH 15				
	REFLECTOR 1 POSITION				
	REFLECTOR 2 POSITION				
	REFL 1 POS				
	REFL 2 POS				
	SCENE DATA				
	BP				
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	CH 4				
	CH 5				
	CH 6				
	CH 7				
	CH 8				
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	CH 13				
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	CH 15				
	REFLECTOR 1 POSITION				
	REFLECTOR 2 POSITION				
	REFL 1 POS				
	REFL 2 POS				
	SCENE DATA				
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	CH 7				
	CH 8				
	CH 9				
	CH 10				
	CH 11				
	CH 12				
	CH 13				
	CH 14				
	CH 15				
	REFLECTOR 1 POSITION				
	REFLECTOR 2 POSITION				
	REFL 1 POS				
	REFL 2 POS				
	SCENE DATA				
	BP				
	CH 3				
	CH 4				
	CH 5				
	CH 6				
	CH 7				
	CH 8				
	CH 9				
	CH 10				
	CH 11				
	CH 12				
	CH 13				
	CH 14				
	CH 15				
	REFLECTOR 1 POSITION				
	REFLECTOR 2 POSITION				
	REFL 1 POS				
	REFL 2 POS				
	SCENE DATA				
	BP				
	CH 3				
	CH 4				
	CH 5				
	CH 6				
	CH 7				
	CH 8				
	CH 9				
	CH 10				
	CH 11				
	CH 12				
	CH 13				
	CH 14				
	CH 15				
	REFLECTOR 1 POSITION				
	REFLECTOR 2 POSITION				
	REFL 1 POS				
	REFL 2 POS				
	SCENE DATA				
	BP				
	CH 3				
	CH 4				
	CH 5				
	CH 6				
	CH 7				
	CH 8				
	CH 9				
	CH 10				
	CH 11				
	CH 12				
	CH 13				
	CH 14				
	CH 15				
	REFLECTOR 1 POSITION				
	REFLECTOR 2 POSITION				
	REFL 1 POS				
	REFL 2 POS				
	SCENE DATA				
	BP				
	CH 3				
	CH 4				
	CH 5				
	CH 6				
	CH 7				
	CH 8				
	CH 9				
	CH 10				
	CH 11				
	CH 12				
	CH 13				
	CH 14				
	CH 15				
	REFLECTOR 1 POSITION				
	REFLECTOR 2 POSITION				
	REFL 1 POS				
	REFL 2 POS				

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16655	672	CH 7	16653
96	CH 8	16426	674	CH 8	16430
98	CH 9	16479	676	CH 9	16477
100	CH 10	16027	678	CH 10	16023
102	CH 11	17416	680	CH 11	17413
104	CH 12	17163	682	CH 12	17155
106	CH 13	19966	684	CH 13	19981
108	CH 14	17941	686	CH 14	17935
110	CH 15	14929	688	CH 15	14926
112	REFLECTOR 1 POSITION 4	474	690	REFLECTOR 1 POSITION 21	3052
114	REFLECTOR 2 POSITION 4	297	692	REFLECTOR 2 POSITION 21	2869
116	REFL 1 POS 4	478	694	REFL 1 POS 21	3056
118	REFL 2 POS 4	300	696	REFL 2 POS 21	2874
120	SCENE DATA BP 4	16199	698	SCENE DATA BP 21	16197
122	CH 3	16361	700	CH 3	16364
124	CH 4	17457	702	CH 4	17459
126	CH 5	16825	704	CH 5	16821
128	CH 6	16655	706	CH 6	16652
130	CH 7	16431	708	CH 7	16426
132	CH 8	16481	710	CH 8	16479
134	CH 9	16039	712	CH 9	16029
136	CH 10	17422	714	CH 10	17406
138	CH 11	17156	716	CH 11	17162
140	CH 12	19967	718	CH 12	19981
142	CH 13	17938	720	CH 13	17957
144	CH 14	14929	722	CH 14	14925
146	CH 15	625	724	REFLECTOR 1 POSITION 22	3202
148	REFLECTOR 1 POSITION 5	443	726	REFLECTOR 2 POSITION 22	3022
150	REFL 1 POS 5	631	728	REFL 1 POS 22	3206
152	REFL 2 POS 5	448	730	REFL 2 POS 22	3027
154	SCENE DATA BP 5	16188	732	SCENE DATA BP 22	16197
156	CH 3	16364	734	CH 3	16363
158	CH 4	17463	736	CH 4	17458
160	CH 5	16826	738	CH 5	16820
162	CH 6	16657	740	CH 6	16652
164	CH 7	16426	742	CH 7	16426
166	CH 8	16483	744	CH 8	16481
168	CH 9	16042	746	CH 9	16020
170	CH 10	17408	748	CH 10	17413
172	CH 11	17153	750	CH 11	17152
174	CH 12	19981	752	CH 12	19984
176	CH 13	17942	754	CH 13	17925
178	CH 14	14929	756	CH 14	14925
180	CH 15	778	758	REFLECTOR 1 POSITION 23	3351
182	REFLECTOR 1 POSITION 6	595	760	REFLECTOR 2 POSITION 23	3171
184	REFL 1 POS 6	781	762	REFL 1 POS 23	3358
186	REFL 2 POS 6	598	764	REFL 2 POS 23	3177
188	SCENE DATA BP 6	16201	766	SCENE DATA BP 23	16195
190	CH 3	16367	768	CH 3	16368
192	CH 4	17463	770	CH 4	17464
	CH 5			CH 5	

FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16827	772	CH 6	16820
196	CH 7	16662	774	CH 7	16655
198	CH 8	16425	776	CH 8	16427
200	CH 9	16487	778	CH 9	16476
202	CH 10	16024	780	CH 10	16026
204	CH 11	17411	782	CH 11	17411
206	CH 12	17161	784	CH 12	17152
208	CH 13	19996	786	CH 13	19978
210	CH 14	17949	788	CH 14	17957
212	CH 15	14932	790	CH 15	14925
214	REFLECTOR 1 POSITION	928	792	REFLECTOR 1 POSITION 24	3502
216	REFLECTOR 2 POSITION	750	794	REFLECTOR 2 POSITION 24	3324
218	REFL 1 POS 7	933	796	REFL 1 POS 24	3508
220	REFL 2 POS 7	749	798	REFL 2 POS 24	3330
222	SCENE DATA BP 7	16201	800	SCENE DATA BP 24	16193
224	CH 3	16365	802	CH 3	16365
226	CH 4	17462	804	CH 4	17457
228	CH 5	16825	806	CH 5	16820
230	CH 6	16654	808	CH 6	16650
232	CH 7	16429	810	CH 7	16421
234	CH 8	16480	812	CH 8	16477
236	CH 9	16025	814	CH 9	16026
238	CH 10	17415	816	CH 10	17413
240	CH 11	17158	818	CH 11	17157
242	CH 12	19967	820	CH 12	19987
244	CH 13	17925	822	CH 13	17947
246	CH 14	14926	824	CH 14	14925
248	CH 15	1080	826	CH 15	3653
250	REFLECTOR 1 POSITION	1898	828	REFLECTOR 1 POSITION 25	3475
252	REFLECTOR 2 POSITION	1084	830	REFLECTOR 2 POSITION 25	3475
254	REFL 1 POS 8	902	832	REFL 1 POS 25	3659
256	REFL 2 POS 8	16190	834	REFL 2 POS 25	3480
258	SCENE DATA BP 8	16366	836	SCENE DATA BP 25	16191
260	CH 3	17461	838	CH 3	16368
262	CH 4	16820	840	CH 4	17460
264	CH 5	16651	842	CH 5	16818
266	CH 6	16429	844	CH 6	16652
268	CH 7	16478	846	CH 7	16427
270	CH 8	16026	848	CH 8	16478
272	CH 9	17405	850	CH 9	16027
274	CH 10	17164	852	CH 10	17412
276	CH 11	19966	854	CH 11	17160
278	CH 12	17929	856	CH 12	19973
280	CH 13	14926	858	CH 13	17933
282	CH 14	1233	860	CH 14	14925
284	CH 15	1052	862	CH 15	3805
286	REFLECTOR 1 POSITION	1236	864	REFLECTOR 1 POSITION 26	3625
288	REFLECTOR 2 POSITION	1054	866	REFLECTOR 2 POSITION 26	3811
290	REFL 1 POS 9	16201	868	REFL 1 POS 26	3632
292	REFL 2 POS 9	16368	870	REFL 2 POS 26	16211
	SCENE DATA BP 9			SCENE DATA BP 26	16369

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 5	17463	872	CH 5	17461
396	CH 6	16817	874	CH 6	16817
398	CH 7	16653	876	CH 7	16654
399	CH 8	16432	878	CH 8	16429
399	CH 9	16477	880	CH 9	16478
399	CH 10	16029	882	CH 10	16028
399	CH 11	17410	884	CH 11	17411
399	CH 12	17156	886	CH 12	17154
399	CH 13	19974	888	CH 13	19976
399	CH 14	17941	890	CH 14	17942
399	CH 15	14927	892	CH 15	14924
399	REFLECTOR 1 POSITION 10	1385	894	REFLECTOR 1 POSITION 27	3969
399	REFLECTOR 2 POSITION 10	1203	896	REFLECTOR 2 POSITION 27	3780
399	REFL 1 POS 10 2ND LOOK	1389	898	REFL 1 POS 27 2ND LOOK	3971
399	REFL 2 POS 10 2ND LOOK	1205	900	REFL 2 POS 27 2ND LOOK	3786
399	SCENE DATA BP 10	16206	902	SCENE DATA BP 27	16179
399	CH 3	16369	904	CH 3	16368
399	CH 4	17458	906	CH 4	17459
399	CH 5	16821	908	CH 5	16817
399	CH 6	16653	910	CH 6	16654
399	CH 7	16429	912	CH 7	16429
399	CH 8	16480	914	CH 8	16475
399	CH 9	16023	916	CH 9	16023
399	CH 10	17412	918	CH 10	17412
399	CH 11	17156	920	CH 11	17158
399	CH 12	19985	922	CH 12	19975
399	CH 13	17942	924	CH 13	17956
399	CH 14	14925	926	CH 14	14925
399	CH 15	1535	928	CH 15	4110
399	REFLECTOR 1 POSITION 11	1357	930	REFLECTOR 1 POSITION 28	3938
399	REFLECTOR 2 POSITION 11	1539	932	REFLECTOR 2 POSITION 28	4114
399	REFL 1 POS 11 2ND LOOK	1357	934	REFL 1 POS 28 2ND LOOK	3937
399	REFL 2 POS 11 2ND LOOK	16178	936	REFL 2 POS 28 2ND LOOK	16175
399	SCENE DATA BP 11	16370	938	SCENE DATA BP 28	16367
399	CH 3	17465	940	CH 3	17462
399	CH 4	16815	942	CH 4	16821
399	CH 5	16653	944	CH 5	16654
399	CH 6	16432	946	CH 6	16428
399	CH 7	16478	948	CH 7	16475
399	CH 8	16029	950	CH 8	16025
399	CH 9	17408	952	CH 9	17413
399	CH 10	17149	954	CH 10	17165
399	CH 11	19978	956	CH 11	19971
399	CH 12	17959	958	CH 12	17957
399	CH 13	14926	960	CH 13	14925
399	CH 14	1687	962	CH 14	4260
399	CH 15	1508	964	CH 15	4085
399	REFLECTOR 1 POSITION 12	1691	966	REFLECTOR 1 POSITION 29	4268
399	REFLECTOR 2 POSITION 12	1509	968	REFLECTOR 2 POSITION 29	4087
399	REFL 1 POS 12 2ND LOOK	16203	970	REFL 1 POS 29 2ND LOOK	16140
399	REFL 2 POS 12 2ND LOOK			REFL 2 POS 29 2ND LOOK	
399	SCENE DATA BP 12			SCENE DATA BP 29	

FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 4	16370	972	CH 4	16372
196	CH 5	17461	974	CH 5	17474
198	CH 6	16818	976	CH 6	16818
100	CH 7	16654	978	CH 7	16653
102	CH 8	16431	980	CH 8	16452
104	CH 9	16477	982	CH 9	16480
106	CH 10	16023	984	CH 10	16023
108	CH 11	17415	986	CH 11	17404
110	CH 12	17161	988	CH 12	17161
112	CH 13	20001	990	CH 13	19975
114	CH 14	17944	992	CH 14	17935
116	CH 15	14926	994	CH 15	14925
118	REFLECTOR 1 POSITION 13	1839	996	REFLECTOR 1 POSITION 30	4419
120	REFLECTOR 2 POSITION 13	1659	998	REFLECTOR 2 POSITION 30	4236
122	REFL 1 POS 13	1843	1000	REFL 1 POS 30	4422
124	REFL 2 POS 13	1660	1002	REFL 2 POS 30	4239
126	SCENE DATA BP 13	16180	1004	SCENE DATA BP 30	16220
128	CH 3	16369	1006	CH 3	16376
130	CH 4	17464	1008	CH 4	17463
132	CH 5	16830	1010	CH 5	16819
134	CH 6	16663	1012	CH 6	16654
136	CH 7	16434	1014	CH 7	16430
138	CH 8	16486	1016	CH 8	16477
140	CH 9	16029	1018	CH 9	16027
142	CH 10	17418	1020	CH 10	17410
144	CH 11	17163	1022	CH 11	17154
146	CH 12	19965	1024	CH 12	19981
148	CH 13	17949	1026	CH 13	17941
150	CH 14	14931	1028	CH 14	14926
152	REFLECTOR 1 POSITION 14	1989	1030	REFLECTOR 1 COLD CAL POS	6017
154	REFLECTOR 2 POSITION 14	1808	1032	REFLECTOR 2 COLD CAL POS	5833
156	REFL 1 POS 14	1994	1034	REFL 1 COLD CAL 2ND LOOK	6018
158	REFL 2 POS 14	1812	1036	REFL 2 COLD CAL 2ND LOOK	5833
160	SCENE DATA BP 14	16184	1038	COLD CAL DATA 1	16228
162	CH 3	16370	1040	CH 3	16372
164	CH 4	17469	1042	CH 4	17464
166	CH 5	16826	1044	CH 5	16820
168	CH 6	16661	1046	CH 6	16652
170	CH 7	16421	1048	CH 7	16435
172	CH 8	16482	1050	CH 8	16476
174	CH 9	16045	1052	CH 9	16029
176	CH 10	17416	1054	CH 10	17412
178	CH 11	17154	1056	CH 11	17159
180	CH 12	19980	1058	CH 12	19980
182	CH 13	17918	1060	CH 13	17940
184	CH 14	14931	1062	CH 14	14924
186	CH 15	2143	1064	CH 15	16223
188	REFLECTOR 1 POSITION 15	1963	1066	REFLECTOR 2 POSITION 15	16370
190	REFL 1 POS 15	2146	1068	REFL 1 POS 30	17460
192	REFL 2 POS 15	1964	1070	REFL 2 POS 30	16819

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	SCENE DATA BP 15	16210	1072		16650
196		16374	1074		16441
198		17473	1076		16476
200		16831	1078		16024
202		16667	1080		17412
204		16430	1082		17157
206		16490	1084		19975
208		16033	1086		17921
210		17418	1088		14925
212		17159	1182	REFLECTOR 1 WARM CAL POS	10416
214		19958	1184	REFLECTOR 2 WARM CAL POS	10233
216		17946	1186	REFL 1 WARM CAL 2ND LOOK	10415
218		14933	1188	REFL 2 WARM CAL 2ND LOOK	10233
220	REFLECTOR 1 POSITION 16	2294	1190	WARM CAL DATA 1	16193
222	REFLECTOR 2 POSITION 16	2114	1192		16371
224	REFL 1 POS 16 2ND LOOK	2298	1194		17469
226	REFL 2 POS 16 2ND LOOK	2115	1196		16824
228	SCENE DATA BP 16	16241	1198		16652
230		16385	1200		16433
232		17472	1202		16478
234		16826	1204		16023
236		16663	1206		17406
238		16433	1208		17160
240		16485	1210		19984
242		16033	1212		17935
244		17424	1214		14925
246		17162	1216		16195
248		19977	1218		16370
250		17930	1220		17462
252		14929	1222		16821
254	REFLECTOR 1 POSITION 17	2444	1224		16651
256	REFLECTOR 2 POSITION 17	2261	1226		16430
258	REFL 1 POS 17 2ND LOOK	2449	1228		16482
260	REFL 2 POS 17 2ND LOOK	2265	1230		16030
262	SCENE DATA BP 17	16195	1232		17407
264		16374	1234		17153
266		17478	1236		19992
268		16827	1238		17932
270		16658	1240		14925
				WARM CAL DATA 2	

JEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
190	SCAN MOTOR A1-1	17826	23.24	4
192	SCAN MOTOR A1-2	18540	23.42	
194	FEEDHORN A1-1	18584	24.12	
196	FEEDHORN A1-2	18808	24.58	
198	RF MUX A1-1	19347	25.13	
200	RF MUX A1-2	19616	25.68	
202	LOCAL OSCILLATOR CHANNEL 3	20613	27.49	
204	LOCAL OSCILLATOR CHANNEL 4	20603	27.17	
206	LOCAL OSCILLATOR CHANNEL 5	20330	27.16	
208	LOCAL OSCILLATOR CHANNEL 6	19597	25.96	
210	LOCAL OSCILLATOR CHANNEL 7	19772	26.09	
212	LOCAL OSCILLATOR CHANNEL 8	19808	27.06	
214	LOCAL OSCILLATOR CHANNEL 15	20445	26.83	
216	PLL LO #2 CHANNELS 9 THROUGH 14	19297	25.07	
218	PLL LO #1 CHANNELS 9 THROUGH 14	20989	28.28	
220	SPARE (NOT USED)	32767	51.27	
222	MIXER/IF AMPLIFIER CHANNEL 3	20278	26.05	
224	MIXER/IF AMPLIFIER CHANNEL 4	20254	26.20	
226	MIXER/IF AMPLIFIER CHANNEL 5	19939	25.98	
228	MIXER/IF AMPLIFIER CHANNEL 6	19562	25.62	
230	MIXER/IF AMPLIFIER CHANNEL 7	19473	25.69	
232	MIXER/IF AMPLIFIER CHANNEL 8	20080	26.20	
234	MIXER/IF AMPLIFIER CH 9 THRU 14	19558	25.11	
236	MIXER/IF AMPLIFIER CHANNEL 15	20077	27.06	
238	IF AMPLIFIER CHANNEL 11 THRU 14	19867	26.25	
240	IF AMPLIFIER CHANNEL 9	19877	26.32	
242	IF AMPLIFIER CHANNEL 10	20034	26.32	
244	IF AMPLIFIER CHANNEL 11	19358	25.34	
246	DC/DC CONVERTER	20274	26.99	
248	IF AMPLIFIER CHANNEL 13	19391	25.37	
250	IF AMPLIFIER CHANNEL 14	19504	25.69	
252	IF AMPLIFIER CHANNEL 12	19282	25.28	
254	RF SHELF A1-1	19024	25.63	
256	RF SHELF A1-2	19506	25.72	
258	DETECTOR/PREAMPLIFIER ASSEMBLY	18628	24.25	
260	A1-1 WARM LOAD 1	23592	23.51	
262	A1-1 WARM LOAD 2	23344	23.45	
264	A1-1 WARM LOAD 3	23378	23.53	
266	A1-1 WARM LOAD 4	23512	23.48	
268	A1-1 WARM LOAD CENTER	23601	23.63	
270	A1-2 WARM LOAD 1	23669	24.07	
272	A1-2 WARM LOAD 2	23821	24.01	
274	A1-2 WARM LOAD 3	23977	24.12	
276	A1-2 WARM LOAD 4	23756	24.15	
278	A1-2 WARM LOAD CENTER	23648	24.05	
280	TEMP SENSOR REFERENCE VOLTAGE	25320		

DESCRIPTION	STATUS	STATUS	STATUS
TANNER A1-1 POWER	ON	ON	ON
TANNER A1-2 POWER	ON	ON	ON
PL POWER	PLLO # 1	PLLO # 1	PLLO # 1
JTENNA IN WARM CAL POSITION MODE	NO	NO	NO
JTENNA IN COLD CAL POSITION MODE	NO	NO	NO
JTENNA IN NADIR POSITION MODE	NO	NO	NO
JTENNA IN FULL SCAN MODE	YES	YES	YES
IRVIVAL HEATER POWER	OFF	OFF	OFF
DDULE POWER	CONNECT	CONNECT	CONNECT
OLD CAL POSITION MSB	ZERO	ZERO	ZERO
OLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA

DESCRIPTION	VALUE	DEG C	VALUE	DEG C	VALUE	DEG C
-1 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4	214	18.0
-2 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4	215	19.4
-1 RF SHELF TEMPERATURE	215	19.4	215	19.4	215	19.4
-2 RF SHELF TEMPERATURE	216	20.7	216	20.7	216	20.7
-1 WARM LOAD TEMPERATURE	214	18.0	214	18.0	214	18.0
-2 WARM LOAD TEMPERATURE	215	19.4	215	19.4	215	19.4
/						
DESCRIPTION	VALUE	AMPS/ VOLTS	VALUE	AMPS/ VOLTS	VALUE	AMPS/ VOLTS
-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	90	41.94	90	41.94	89	41.47
-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	87	40.54	86	40.08	85	39.61
GNAL PROCESSING +15 VDC	170	14.67	170	14.67	170	14.67
GNAL DRIVE +15 VDC	173	14.93	172	14.84	172	14.84
GNAL PROCESSING -15 VDC	148	-15.15	148	-15.15	148	-15.15
GNAL DRIVE -15 VDC	151	-15.00	150	-15.05	149	-15.10
CEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85	157	7.85
GNAL PROCESSOR +5 VDC	145	4.93	145	4.83	145	4.83
GNAL DRIVE +5 VDC	148	4.93	148	4.93	147	4.90
CEIVER MIXER/IF +10 VDC	169	9.76	169	9.76	169	9.76
BASE LOCK LOOP (CHANNEL 9/14)	169	14.58	169	14.58	169	14.58
BASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30	145	-15.30
O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78	171	9.78
O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78	171	9.78
O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84	172	9.84
O. VOLTAGE (CHANNEL 3)	172	9.84	172	9.84	172	9.84
O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84	172	9.84
O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78	171	9.78
LO # 2 LOCK DETECT	1	0.02	1	0.02	1	0.02
LO # 1 LOCK DETECT	220	4.40	219	4.38	220	4.40
O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67	170	14.67

FULL SCAN MODE

PRT TEMPERATURES

ARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
601	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

LXED TARGET

ASEPLATE

THERMOCOUPLE TEMPERATURES

LXED TARGET SHROUD

ARIABLE TARGET SHROUD

LXED TARGET N2

ARIABLE TARGET N2

EATER N2

LXED TARGET FLOW METER

ARIABLE TARGET FLOW METER

ASEPLATE HEATER N2

ASEPLATE N2

ASEPLATE FLOW METER

JUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
525	73.00	577	74.00
579	75.00	581	76.00

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TEST DATA SHEET 20
Reflector Positions Section [IV] (Paragraph 3.2.4.3.4.1)

BP	A1-1 Reflector				A1-2 Reflector			
	Element (For Ref)	Measured*	Required**	Pass/Fail	Element (For Ref)	Measured*	Required**	Pass/Fail
01	0014			P	0016			P
02	0048				0050			
03	0082				0084			
04	0116				0118			
05	0150				0152			
06	0184				0186			
07	0218				0220			
08	0252				0254			
09	0286				0288			
10	0320				0322			
11	0354				0356			
12	0388				0390			
13	0422				0424			
14	0456				0458			
15	0490				0492			
16	0524				0526			
17	0558				0560			
18	0592				0594			
19	0626				0628			
20	0660				0662			
21	0694				0696			
22	0728				0730			
23	0762				0764			
24	0796				0798			
25	0830				0832			
26	0864				0866			
27	0890				0900			
28	0932				0934			
29	0966				0968			
30	1000				1002			
CC	1034				1036			
WC	1186				1188			

* Actual counts from computer printout. Rewriting counts on this data sheet is optional.

** Required range for instrument serial number from TDS 6 of AE-26002/1 ± 10 counts. Rewriting range on this data sheet is optional.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

S/N: 109

Test Systems Engineer R. Hais

Date 11/12/99



NOV 19 99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date 11/19/99

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281

SCAN NUMBER

P1 19-NOV-99 19:23:45

FULL SCAN MODE

MSU A1-33 A1.EXE

5] DIGITAL A DATA ELEMENT 0000

6] DIGITAL B DATA ELEMENT 00

7] ANALOG DATA ELEMENT 00

REFLECTOR POSITIONS											
1											
BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2
1	23	23	9	1232	1236	17	2445	2450	25	3654	3659
2	166	174	10	1385	1388	18	2597	2601	26	3805	3811
3	323	326	11	1534	1538	19	2749	2753	27	3969	3971
4	474	478	12	1687	1691	20	2899	2905	28	4110	4114
5	626	632	13	1839	1843	21	3052	3056	29	4259	4267
6	778	782	14	1990	1994	22	3201	3206	30	4419	4422
7	929	933	15	2143	2146	23	3350	3357	CC	6017	6017
8	1080	1084	16	2294	2299	24	3503	3508	WC	10415	10416
[21] UP [22] DOWN											

POWER [4] ON SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

7DS 20

AMSU A1-33 A1.EXE FULL SCAN MODE P1 19-NOV-99 19:24:01 SCAN NUMBER 283

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

		REFLECTOR POSITIONS									
		2				2					
3P	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2
1	16225	16225	9	1053	1054	17	2261	2265	25	3475	3480
2	16373	16375	10	1205	1205	18	2415	2419	26	3626	3632
3	143	148	11	1357	1357	19	2569	2571	27	3781	3785
4	296	300	12	1507	1509	20	2717	2722	28	3938	3936
5	445	448	13	1659	1660	21	2868	2874	29	4085	4088
6	597	599	14	1809	1812	22	3022	3027	30	4235	4239
7	749	749	15	1964	1963	23	3172	3177	CC	5834	5834
8	899	902	16	2114	2115	24	3323	3329	WC	10232	10233
[21] UP		[22] DOWN									

POWER [4] ON SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

6 Apr 99

TEST DATA SHEET 21

Digital-A Data Output Radiometer Data Section [V] (Paragraph 3.2.4.3.4.1)

BP	A1-2 Channel-3 (50.3 GHz)				A1-1 Channel-9 (57.290344 GHz)			
	Element (For Ref)	Position*	Required**	Pass/Fail	Element (For Ref)	Position*	Required**	Pass/Fail
01	0018				0030			
02	0052				0064			
03	0086				0098			
04	0120				0132			
05	0154				0166			
06	0188				0200			
07	0222				0234			
08	0256				0268			
09	0290				0302			
10	0324				0336			
11	0356				0370			
12	0392				0404			
13	0426				0438			
14	0460				0472			
15	0494				0506			
16	0528				0540			
17	0562				0574			
18	0596				0608			
19	0630				0642			
20	0664				0676			
21	0698				0710			
22	0732				0744			
23	0766				0778			
24	0800				0812			
25	0834				0846			
26	0868				0880			
27	0902				0914			
28	0936				0948			
29	0970				0982			
30	1004				1016			
CC	1038				1050			
WC	1190				1202			

* Actual counts from computer printout. Rewriting counts on this data sheet is optional.

** Required = $16,500 \pm 4000$ counts.Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613S/N: 109Test Systems Engineer R. HailDate 11/19/99

103 19 99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

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MSU A1-33 A1.EXE FULL SCAN MODE P1 19-NOV-99 19:24:25 SCAN NUMBER 286
[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BP DATA		BP DATA		BP DATA		BP DATA	
BP DATA		BP DATA		BP DATA		BP DATA	
1	16203	9	16196	17	16191	25	16184
2	16213	10	16200	18	16195	26	16203
3	16188	11	16181	19	16192	27	16185
4	16188	12	16200	20	16194	28	16168
5	16185	13	16178	21	16193	29	16137
6	16191	14	16177	22	16189	30	16216
7	16193	15	16206	23	16193	CC	16220
8	16181	16	16239	24	16191	WC	16188

[21] UP [22] DOWN

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL
SELECT TOUCHSCREEN BUTTON 2 [1] RETURN

TDS 21

W3U A1-33 A1.EXE FULL SCAN MODE P1 19-NOV-99 19:24:47 SCAN NUMBER 289

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BP		DATA		BP	DATA		BP	DATA		BP	DATA	

6 Apr 99

TEST DATA SHEET 22 (Sheet 1 of 2)
Full Scan Mode Temperature Sensors Section [VI] (Paragraph 3.2.4.3.4.1)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1090	A1-1 Warm Load 1		25 ± 15	P
1092	A1-1 Warm Load 2		25 ± 15	
1094	A1-1 Warm Load 3		25 ± 15	
1096	A1-1 Warm Load 4		25 ± 15	
1098	A1-1 Warm Load Center		25 ± 15	
1100	A1-2 Warm Load 1		25 ± 15	
1102	A1-2 Warm Load 2		25 ± 15	
1104	A1-2 Warm Load 3		25 ± 15	
1106	A1-2 Warm Load 4		25 ± 15	
1108	A1-2 Warm Load Center		25 ± 15	
1110	Local Oscillator Channel 7		25 ± 15	
1112	Local Oscillator Channel 8		25 ± 15	
1114	Local Oscillator Channel 15		25 ± 15	
1116	PLL LO #2 Channels 9-14		25 ± 15	
1118	PLL LO #1 Channels 9-14		25 ± 15	
1120	PLLO (Reference Oscillator)**/ Not used ***		25 ± 15	
1122	Mixer I.F. Amp. Channel 3		25 ± 15	
1124	Mixer I.F. Amp. Channel 4		25 ± 15	
1126	Mixer I.F. Amp. Channel 5		25 ± 15	
1128	Mixer I.F. Amp. Channel 6		25 ± 15	
1130	Mixer I.F. Amp. Channel 7		25 ± 15	
1132	Mixer I.F. Amp. Channel 8		25 ± 15	
1134	Mixer I.F. Amp. Channels 9-14		25 ± 15	
1136	Mixer I.F. Amp. Channel 15		25 ± 15	✓

* Value is from the STE printout sheets. Copying data to this sheet is optional.

** For S/N 101 through 104.

*** For S/N 105 and up.

(Continued on Sheet 2)

TEST DATA SHEET 22 (Sheet 2 of 2)
Full Scan Mode Temperature Sensors Section [VI (Paragraph 3.2.4.3.4.1)]

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1138	I.F. Amp. Channel 11-14		25 ± 15	P
1140	I.F. Amp. Channel 9		25 ± 15	
1142	I.F. Amp. Channel 10		25 ± 15	
1144	I.F. Amp. Channel 11		25 ± 15	
1146	DC/DC Converter		25 ± 15	
1148	I.F. Amp. Channel 13		25 ± 15	
1150	I.F. Amp. Channel 14		25 ± 15	
1152	I.F. Amp. Channel 12		25 ± 15	
1154	RF Shelf A1-1		25 ± 15	
1156	RF Shelf A1-2		25 ± 15	
1158	Detector Preamp Assy.		25 ± 15	
1160	Scan Motor A1-1		25 ± 15	
1162	Scan Motor A1-2		25 ± 15	
1164	Feed Horn A1-1		25 ± 15	
1166	Feed Horn A1-2		25 ± 15	
1168	R.F. Mux A1-1		25 ± 15	
1170	R.F. Mux A1-2		25 ± 15	
1172	Local Oscillator Channel 3		25 ± 15	
1174	Local Oscillator Channel 4		25 ± 15	
1176	Local Oscillator Channel 5		25 ± 15	
1178	Local Oscillator Channel 6		25 ± 15	
1180	Temp Sensor Ref Voltage Count		**	

* Value is from the STE printout sheets. Copying data to this sheet is optional.
** = Count of 24,552 +1765,-1308.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 248613 S/N: 109

N. Hargis 11/19/99
Test Systems Engineer Date



NOV 19 99

Customer Representative
(Flight Hardware Only) Date

Quality Control Date

AMSU A1-33 A1-EXE P1 19-NOV-99 19:25:07 SCAN NUMBER 291

[5] DIGITAL A DATA

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

DIGITAL A TEMPERATURES 1 TO 16			
NO	DATA	TEMP C	TEMP C
1	SCAN MOTOR A1-1	23.26	27.39
2	SCAN MOTOR A1-2	23.43	26.10
3	FEEDHORN A1-1	24.16	26.26
4	FEEDHORN A1-2	24.65	27.30
5	RF MUX A1-1	25.29	27.14
6	RF MUX A1-2	25.86	25.07
7	LO CHANNEL 3	27.78	28.87
8	LO CHANNEL 4	27.46	51.27
[21] UP	[22] DOWN		

POWER [4] ON SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

7DS 22-

AMSU A1-33 A1.EXE FULL SCAN MODE P1 19-NOV-99 19:25:19 SCAN NUMBER 293
 [5] DIGITAL A DATA ELEMENT 0000
 [6] DIGITAL B DATA ELEMENT 00
 [7] ANALOG DATA ELEMENT 00

DIGITAL A TEMPERATURES 17 TO 32			
NO	DATA	TEMP C	NO
17 MIXER IF CH 3	20389	26.26	25 IF AMP CH 11/14
18 MIXER IF CH 4	20379	26.44	26 IF AMP CH 9
19 MIXER IF CH 5	20061	26.22	27 IF AMP CH 10
20 MIXER IF CH 6	19660	25.81	28 IF AMP CH 11
21 MIXER IF CH 7	19581	25.90	29 DC/DC CONVERTER
22 MIXER IF CH 8	20209	26.44	30 IF AMP CH 13
23 MIXER IF CH 9/14	19634	25.25	31 IF AMP CH 14
24 MIXER IF CH 15	20225	27.34	32 IF AMP CH 12
[21] UP		[22] DOWN	

POWER [4] ON
 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
 SELECT TOUCHSCREEN BUTTON 2

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

DIGITAL A TEMPERATURES 31 TO 46		DIGITAL B TEMPERATURES 31 TO 46		ANALOG DATA	
NO	DATA	TEMP C	NO	DATA	TEMP C
31	IF AMP CH 14	25.83	39	A1-1 WARM LOAD	23.46
32	IF AMP CH 12	25.42	40	A1-1 WARM LOAD	23.61
33	RF SHELF A1-1	25.94	41	A1-2 WARM LOAD	24.04
34	RF SHELF A1-2	25.97	42	A1-2 WARM LOAD	23.99
35	DETECTOR/PREAMP	24.37	43	A1-2 WARM LOAD	24.10
36	A1-1 WARM LOAD 1	23.51	44	A1-2 WARM LOAD	24.13
37	A1-1 WARM LOAD 2	23.44	45	A1-2 WARM LOAD	24.03
38	A1-1 WARM LOAD 3	23.53		THERMAL REFERENCE	
[21]	UP	[22]	DOWN		

POWER [4] ON SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
 SELECT TOUCHSCREEN BUTTON 2

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TEST DATA SHEET 23
Digital-A Data Output Warm Cal Mode Synch Sequence,
Unit I.D./Serial Number and Digital-B Serial Data Verification
Sections [I], [II], and [III] (Paragraph 3.2.4.3.4.2)

Step	Element (For Ref)	Description	Recorded Value	Required Value	Pass/Fail
[I]	0001	Sync Sequence Byte 1	255	255	P
	0002	Sync Sequence Byte 2	255	255	
	0003	Sync Sequence Byte 3	255	255	
[II]	0004	Unit I.D. and Serial N	33	*	
[III]	0005	Digital-B Data Byte 1	4	4	
	0006	Digital-B Data Byte 2	14	14	
	0007	Digital-B Data Byte 3	0	0	
	0008	Digital-B Data Byte 4	0	0	↓
* AMSU A1 Identification Words (data entered in decimal system)					
			Binary	Decimal	
	AMSU-A1 S/N 101		00000001	1	
	AMSU-A1 S/N 102		00000101	5	
	AMSU-A1 S/N 103		00001001	9	
	AMSU-A1 S/N 104		00001101	13	
	AMSU-A1 S/N 105		00010001	17	
	AMSU-A1 S/N 106		00010101	21	
	AMSU-A1 S/N 107		00011001	25	
	AMSU-A1 S/N 108		00011101	29	
	AMSU-A1 S/N 109		00100001	33	

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109

R. Hight 11/19/99
Test Systems Engineer Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

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[SU A1-33 .EXE WARM CAL MODE P1 19-NOV-99 1 2:19 SCAN NUMBER 345

5] DIGITAL A DATA ELEMENT 0000

6] DIGITAL B DATA ELEMENT 00

7] ANALOG DATA ELEMENT 00

9] MODULE POWER = CONNECT COMMANDS ANTENNA IN COLD CAL POSIT = NO [15]

10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]

11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = NO [17]

12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL0 # 1 [18]

13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]

14] ANTENNA IN WARM CAL POSIT = YES COLD CAL POSITION LSB = ZERO [20]

POWER [4] ON SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT TOUCHSCREEN BUTTON 3

70323

VO: 748613 OP: 0810 1ST CPT
N: 1331720-3-II SN: 109
TEST ENG: R. H. H. DATE: 11/19/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16617	672	CH 7	16619
96	CH 8	16388	674	CH 8	16388
98	CH 9	16439	676	CH 9	16440
100	CH 10	15984	678	CH 10	15982
102	CH 11	17339	680	CH 11	17345
104	CH 12	17095	682	CH 12	17093
106	CH 13	19895	684	CH 13	19887
108	CH 14	17870	686	CH 14	17869
110	CH 15	14871	688	CH 15	14873
112	REFLECTOR 1 POSITION 4	10413	690	REFLECTOR 1 POSITION 21	10412
114	REFLECTOR 2 POSITION 4	10226	692	REFLECTOR 2 POSITION 21	10226
116	REFL 1 POS 4 2ND LOOK	10413	694	REFL 1 POS 21 2ND LOOK	10412
118	REFL 2 POS 4 2ND LOOK	10226	696	REFL 2 POS 21 2ND LOOK	10226
120	WARM CAL SAMPLE 4	16174	698	WARM CAL SAMPLE 21	16167
122	CH 3	16298	700	CH 3	16297
124	CH 4	17419	702	CH 4	17417
126	CH 5	16773	704	CH 5	16775
128	CH 6	16618	706	CH 6	16617
130	CH 7	16387	708	CH 7	16387
132	CH 8	16439	710	CH 8	16438
134	CH 9	15982	712	CH 9	15985
136	CH 10	17343	714	CH 10	17342
138	CH 11	17093	716	CH 11	17090
140	CH 12	19894	718	CH 12	19889
142	CH 13	17856	720	CH 13	17847
144	CH 14	14872	722	CH 14	14872
146	CH 15	10412	724	REFLECTOR 1 POSITION 22	10412
148	REFLECTOR 1 POSITION 5	10226	726	REFLECTOR 2 POSITION 22	10226
150	REFL 1 POS 5 2ND LOOK	10412	728	REFL 1 POS 22 2ND LOOK	10412
152	REFL 2 POS 5 2ND LOOK	10226	730	REFL 2 POS 22 2ND LOOK	10226
154	WARM CAL SAMPLE 5	16173	732	WARM CAL SAMPLE 22	16173
156	CH 3	16297	734	CH 3	16297
158	CH 4	17413	736	CH 4	17416
160	CH 5	16773	738	CH 5	16776
162	CH 6	16616	740	CH 6	16619
164	CH 7	16388	742	CH 7	16385
166	CH 8	16437	744	CH 8	16438
168	CH 9	15986	746	CH 9	15985
170	CH 10	17344	748	CH 10	17344
172	CH 11	17090	750	CH 11	17091
174	CH 12	19889	752	CH 12	19890
176	CH 13	17853	754	CH 13	17849
178	CH 14	14872	756	CH 14	14872
180	CH 15	10412	758	REFLECTOR 1 POSITION 23	10412
182	REFLECTOR 1 POSITION 6	10226	760	REFLECTOR 2 POSITION 23	10226
184	REFL 1 POS 6 2ND LOOK	10412	762	REFL 1 POS 23 2ND LOOK	10412
186	REFL 2 POS 6 2ND LOOK	10226	764	REFL 2 POS 23 2ND LOOK	10226
188	WARM CAL SAMPLE 6	16177	766	WARM CAL SAMPLE 23	16171
190	CH 3	16298	768	CH 3	16296
192	CH 4	17413	770	CH 4	17416
	CH 5			CH 5	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16776	772	CH 6	16774
196	CH 7	16621	774	CH 7	16616
198	CH 8	16391	776	CH 8	16386
200	CH 9	16437	778	CH 9	16439
202	CH 10	15987	780	CH 10	15986
204	CH 11	17340	782	CH 11	17343
206	CH 12	17088	784	CH 12	17085
208	CH 13	19887	786	CH 13	19892
210	CH 14	17848	788	CH 14	17855
212	CH 15	14872	790	CH 15	14872
214	REFLECTOR 1 POSITION	10412	792	REFLECTOR 1 POSITION 24	10412
216	REFLECTOR 2 POSITION	10226	794	REFLECTOR 2 POSITION 24	10226
218	REFL 1 POS 7	10412	796	REFL 1 POS 24 2ND LOOK	10412
220	REFL 2 POS 7	10226	798	REFL 2 POS 24 2ND LOOK	10226
222	WARM CAL SAMPLE 7	16169	800	WARM CAL SAMPLE 24	16166
224	CH 3	16299	802	CH 3	16298
226	CH 4	17415	804	CH 4	17418
228	CH 5	16776	806	CH 5	16775
230	CH 6	16617	808	CH 6	16619
232	CH 7	16386	810	CH 7	16390
234	CH 8	16441	812	CH 8	16438
236	CH 9	15984	814	CH 9	15984
238	CH 10	17345	816	CH 10	17346
240	CH 11	17080	818	CH 11	17090
242	CH 12	19880	820	CH 12	19906
244	CH 13	17861	822	CH 13	17863
246	CH 14	14871	824	CH 14	14872
248	CH 15	10412	826	CH 15	10412
250	REFLECTOR 1 POSITION	10226	828	REFLECTOR 1 POSITION 25	10226
252	REFLECTOR 2 POSITION	10412	830	REFLECTOR 2 POSITION 25	10413
254	REFL 1 POS 8	10226	832	REFL 1 POS 25 2ND LOOK	10226
256	REFL 2 POS 8	16171	834	REFL 2 POS 25 2ND LOOK	16168
258	WARM CAL SAMPLE 8	16294	836	WARM CAL SAMPLE 25	16295
260	CH 3	17413	838	CH 3	17413
262	CH 4	16775	840	CH 4	16775
264	CH 5	16623	842	CH 5	16614
266	CH 6	16390	844	CH 6	16388
268	CH 7	16435	846	CH 7	16437
270	CH 8	15984	848	CH 8	15987
272	CH 9	17349	850	CH 9	17343
274	CH 10	17090	852	CH 10	17088
276	CH 11	19901	854	CH 11	19888
278	CH 12	17876	856	CH 12	17870
280	CH 13	14873	858	CH 13	14871
282	CH 14	10412	860	CH 14	10413
284	CH 15	10226	862	CH 15	10226
286	REFLECTOR 1 POSITION	10226	864	REFLECTOR 1 POSITION 26	10226
288	REFLECTOR 2 POSITION	10413	866	REFLECTOR 2 POSITION 26	10413
290	REFL 1 POS 9	10226	868	REFL 1 POS 26 2ND LOOK	10226
292	REFL 2 POS 9	16173	870	REFL 2 POS 26 2ND LOOK	16169
	WARM CAL SAMPLE 9	16300		WARM CAL SAMPLE 26	16299

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17417	CH 5	REFLECTOR 1 POSITION 27	17411
296	CH 6	16775	CH 6	REFLECTOR 2 POSITION 27	16777
298	CH 7	16617	CH 7	REFL 1 POS 27 2ND LOOK	16619
300	CH 8	16387	CH 8	REFL 2 POS 27 2ND LOOK	16387
302	CH 9	16434	CH 9	WARM CAL SAMPLE 27	16438
304	CH 10	15989	CH 10	CH 3	15986
306	CH 11	17337	CH 11	CH 4	17344
308	CH 12	17090	CH 12	CH 5	17086
310	CH 13	19905	CH 13	CH 6	19907
312	CH 14	17870	CH 14	CH 7	17846
314	CH 15	14872	CH 15	CH 8	14872
316	REFLECTOR 1 POSITION 10	10413	CH 15	CH 9	10413
318	REFLECTOR 2 POSITION 10	10226	CH 15	CH 10	10226
320	REFL 1 POS 10 2ND LOOK	10226	CH 15	CH 11	10226
322	REFL 2 POS 10 2ND LOOK	10226	CH 15	CH 12	10226
324	WARM CAL SAMPLE 10	16171	CH 15	CH 13	16166
326	CH 3	16300	CH 15	CH 14	16296
328	CH 4	17415	CH 15	CH 15	17415
330	CH 5	16776	CH 15	CH 15	16772
332	CH 6	16616	CH 15	CH 15	16617
334	CH 7	16383	CH 15	CH 15	16385
336	CH 8	16438	CH 15	CH 15	16439
338	CH 9	15985	CH 15	CH 15	15982
340	CH 10	17341	CH 15	CH 15	17341
342	CH 11	17097	CH 15	CH 15	17095
344	CH 12	19880	CH 15	CH 15	19886
346	CH 13	17866	CH 15	CH 15	17852
348	CH 14	14872	CH 15	CH 15	14871
350	CH 15	10412	CH 15	CH 15	10413
352	REFLECTOR 1 POSITION 11	10226	CH 15	CH 15	10226
354	REFLECTOR 2 POSITION 11	10226	CH 15	CH 15	10413
356	REFL 1 POS 11 2ND LOOK	10226	CH 15	CH 15	10226
358	REFL 2 POS 11 2ND LOOK	16168	CH 15	CH 15	16173
360	WARM CAL SAMPLE 11	16298	CH 15	CH 15	16296
362	CH 3	17416	CH 15	CH 15	17416
364	CH 4	16774	CH 15	CH 15	16773
366	CH 5	16618	CH 15	CH 15	16617
368	CH 6	16387	CH 15	CH 15	16385
370	CH 7	16442	CH 15	CH 15	16439
372	CH 8	15985	CH 15	CH 15	15984
374	CH 9	17339	CH 15	CH 15	17341
376	CH 10	17084	CH 15	CH 15	17090
378	CH 11	19877	CH 15	CH 15	19881
380	CH 12	17839	CH 15	CH 15	17831
382	CH 13	14873	CH 15	CH 15	14871
384	CH 14	10412	CH 15	CH 15	10413
386	REFLECTOR 1 POSITION 12	10226	CH 15	CH 15	10226
388	REFLECTOR 2 POSITION 12	10412	CH 15	CH 15	10413
390	REFL 1 POS 12 2ND LOOK	10226	CH 15	CH 15	10226
392	REFL 2 POS 12 2ND LOOK	16171	CH 15	CH 15	10226
394	WARM CAL SAMPLE 12	16171	CH 15	CH 15	16172

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16297	972	CH 4	16295
396	CH 5	17415	974	CH 5	17414
398	CH 6	16776	976	CH 6	16776
400	CH 7	16616	978	CH 7	16617
402	CH 8	16386	980	CH 8	16386
404	CH 9	16436	982	CH 9	16434
406	CH 10	15983	984	CH 10	15987
408	CH 11	17342	986	CH 11	17340
410	CH 12	17091	988	CH 12	17091
412	CH 13	19895	990	CH 13	19891
414	CH 14	17874	992	CH 14	17835
416	CH 15	14873	994	CH 15	14872
418	REFLECTOR 1 POSITION 13	10412	996	REFLECTOR 1 POSITION 30	10412
420	REFLECTOR 2 POSITION 13	10226	998	REFLECTOR 2 POSITION 30	10226
422	REFL 1 POS 13 2ND LOOK	10412	1000	REFL 1 POS 30 2ND LOOK	10412
424	REFL 2 POS 13 2ND LOOK	10226	1002	REFL 2 POS 30 2ND LOOK	10226
426	WARM CAL SAMPLE 13	16170	1004	WARM CAL SAMPLE 30	16169
428	CH 3	16298	1006	CH 3	16296
430	CH 4	17412	1008	CH 4	17411
432	CH 5	16774	1010	CH 5	16776
434	CH 6	16619	1012	CH 6	16618
436	CH 7	16385	1014	CH 7	16389
438	CH 8	16438	1016	CH 8	16437
440	CH 9	15988	1018	CH 9	15986
442	CH 10	17342	1020	CH 10	17347
444	CH 11	17093	1022	CH 11	17084
446	CH 12	19888	1024	CH 12	19906
448	CH 13	17845	1026	CH 13	17843
450	CH 14	14872	1028	CH 14	14873
452	CH 15	10412	1030	CH 15	OE
454	REFLECTOR 1 POSITION 14	10226	1032	REFLECTOR 1 COLD CAL POS	OE
456	REFLECTOR 2 POSITION 14	10412	1034	REFLECTOR 2 COLD CAL POS	OE
458	REFL 1 POS 14 2ND LOOK	10226	1036	REFL 1 COLD CAL 2ND LOOK	OE
460	REFL 2 POS 14 2ND LOOK	16165	1038	REFL 2 COLD CAL 2ND LOOK	OE
462	WARM CAL SAMPLE 14	16293	1040	COLD CAL DATA 1	0
464	CH 3	17414	1042	CH 3	0
466	CH 4	16777	1044	CH 4	0
468	CH 5	16615	1046	CH 5	0
470	CH 6	16390	1048	CH 6	0
472	CH 7	16437	1050	CH 7	0
474	CH 8	15983	1052	CH 8	0
476	CH 9	17344	1054	CH 9	0
478	CH 10	17091	1056	CH 10	0
480	CH 11	19895	1058	CH 11	0
482	CH 12	17831	1060	CH 12	0
484	CH 13	14873	1062	CH 13	0
486	CH 14	10412	1064	CH 14	0
488	CH 15	10226	1066	CH 15	0
490	REFLECTOR 1 POSITION 15	10412	1068	REFLECTOR 1 COLD CAL DATA 2	0
492	REFLECTOR 2 POSITION 15	10226	1070	REFLECTOR 2 COLD CAL DATA 2	0
494	REFL 1 POS 15 2ND LOOK	10412			
496	REFL 2 POS 15 2ND LOOK	10226			

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	WARM CAL SAMPLE 15	16173	1072	CH 7	0
196		16298	1074	CH 8	0
198		17414	1076	CH 9	0
200		16778	1078	CH 10	0
202		16618	1080	CH 11	0
204		16386	1082	CH 12	0
206		16436	1084	CH 13	0
208		15985	1086	CH 14	0
210		17341	1088	CH 15	0
212		17088	1182	REFLECTOR 1 WARM CAL POS	0E
214		19901	1184	REFLECTOR 2 WARM CAL POS	0E
216		17862	1186	REFL 1 WARM CAL 2ND LOOK	0E
218		14873	1188	REFL 2 WARM CAL 2ND LOOK	0E
220	REFLECTOR 1 POSITION 16	10413	CH 3		0
222	REFLECTOR 2 POSITION 16	10226	CH 4		0
224	REFL 1 POS 16 2ND LOOK	10413	CH 5		0
226	REFL 2 POS 16 2ND LOOK	10226	CH 6		0
228	WARM CAL SAMPLE 16	16171	CH 7		0
230		16297	CH 8		0
232		17415	CH 9		0
234		16775	CH 10		0
236		16620	CH 11		0
238		16384	CH 12		0
240		16439	CH 13		0
242		15986	CH 14		0
244		17339	CH 15		0
246		17089	CH 3		0
248		19885	CH 4		0
250		17856	CH 5		0
252		14873	CH 6		0
254	REFLECTOR 1 POSITION 17	10413	CH 7		0
256	REFLECTOR 2 POSITION 17	10226	CH 8		0
258	REFL 1 POS 17 2ND LOOK	10413	CH 9		0
260	REFL 2 POS 17 2ND LOOK	10226	CH 10		0
262	WARM CAL SAMPLE 17	16170	CH 11		0
264		16298	CH 12		0
266		17414	CH 13		0
268		16774	CH 14		0
270		16619	CH 15		0

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
190	SCAN MOTOR A1-1	17852	23.29	
192	SCAN MOTOR A1-2	18547	23.43	
194	FEEDHORN A1-1	18731	24.39	
196	FEEDHORN A1-2	19047	25.04	
198	RF MUX A1-1	19739	25.87	
200	RF MUX A1-2	20093	26.58	
202	LOCAL OSCILLATOR CHANNEL 3	21234	28.67	
204	LOCAL OSCILLATOR CHANNEL 4	21228	28.35	
206	LOCAL OSCILLATOR CHANNEL 5	20846	28.14	
208	LOCAL OSCILLATOR CHANNEL 6	19875	26.48	
210	LOCAL OSCILLATOR CHANNEL 7	20170	26.84	
212	LOCAL OSCILLATOR CHANNEL 8	20360	28.10	
214	LOCAL OSCILLATOR CHANNEL 15	21128	28.11	
216	PLL LO #2 CHANNELS 9 THROUGH 14	19420	25.30	
218	PLL LO #1 CHANNELS 9 THROUGH 14	22132	30.46	
220	SPARE (NOT USED)	32767	51.27	
222	MIXER//IF AMPLIFIER CHANNEL 3	20750	26.94	
224	MIXER//IF AMPLIFIER CHANNEL 4	20769	27.18	
226	MIXER//IF AMPLIFIER CHANNEL 5	20446	26.94	
228	MIXER//IF AMPLIFIER CHANNEL 6	19947	26.35	
230	MIXER//IF AMPLIFIER CHANNEL 7	19916	26.53	
232	MIXER//IF AMPLIFIER CHANNEL 8	20611	27.20	
234	MIXER//IF AMPLIFIER CH 9 THRU 14	19888	25.74	
236	MIXER//IF AMPLIFIER CHANNEL 15	20629	28.11	
238	IF AMPLIFIER CHANNEL 11 THRU 14	20553	27.55	
240	IF AMPLIFIER CHANNEL 9	20568	27.64	
242	IF AMPLIFIER CHANNEL 10	20725	27.92	
244	IF AMPLIFIER CHANNEL 11	19664	25.82	
246	DC/DC CONVERTER	21251	28.82	
248	IF AMPLIFIER CHANNEL 13	19693	25.94	
250	IF AMPLIFIER CHANNEL 14	19804	26.25	
252	IF AMPLIFIER CHANNEL 12	19587	25.85	
254	RF SHELF A1-1	19591	26.71	
256	RF SHELF A1-2	20010	26.68	
258	DETECTOR/PREAMPLIFIER ASSEMBLY	18888	24.74	
260	A1-1 WARM LOAD 1	23579	23.49	
262	A1-1 WARM LOAD 2	23333	23.42	
264	A1-1 WARM LOAD 3	23565	23.51	
266	A1-1 WARM LOAD 4	23490	23.44	
268	A1-1 WARM LOAD CENTER	23589	23.60	
270	A1-2 WARM LOAD 1	23644	24.02	
272	A1-2 WARM LOAD 2	23793	24.95	
274	A1-2 WARM LOAD 3	23951	24.07	
276	A1-2 WARM LOAD 4	23728	24.09	
278	A1-2 WARM LOAD CENTER	23624	24.00	
280	TEMP SENSOR REFERENCE VOLTAGE	25321		

DESCRIPTION

STATUS

STATUS

STATUS

ANNER A1-1 POWER	ON		ON
ANNER A1-2 POWER	ON		ON
L POWER	PLLO # 1	PLLO # 1	PLLO # 1
ITENNA IN WARM CAL POSITION MODE	YES	YES	YES
ITENNA IN COLD CAL POSITION MODE	NO	NO	NO
ITENNA IN NADIR POSITION MODE	NO	NO	NO
ITENNA IN FULL SCAN MODE	NO	NO	NO
IRIVAL HEATER POWER	OFF	OFF	OFF
DULE POWER	CONNECT	CONNECT	CONNECT
OLD CAL POSITION MSB	ZERO	ZERO	ZERO
OLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA

DESCRIPTION

VALUE

DEG C

VALUE

DEG C

VALUE

DEG C

-1 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0	215	19.4
-2 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4	215	19.4
-1 RF SHELF TEMPERATURE	215	19.4	215	19.4	215	19.4
-2 RF SHELF TEMPERATURE	217	22.1	217	22.1	217	22.1
-1 WARM LOAD TEMPERATURE	214	18.0	214	18.0	214	18.0
-2 WARM LOAD TEMPERATURE	215	19.4	215	19.4	215	19.4

DESCRIPTION

VALUE

VALUE

AMPS/

VOLTS

AMPS/

VOLTS

-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	13	6.06	11	5.13	10	4.66
-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	11	5.13	10	4.66	8	3.73
GNAL PROCESSING +15 VDC	170	14.67	170	14.67	170	14.67
ITENNA DRIVE +15 VDC	170	14.67	169	14.58	169	14.58
GNAL PROCESSING -15 VDC	148	-15.15	148	-15.15	148	-15.15
ITENNA DRIVE -15 VDC	147	-15.20	147	-15.20	147	-15.20
CEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85	157	7.85
GNAL PROCESSOR +5 VDC	145	4.83	145	4.83	145	4.83
ITENNA DRIVE +5 VDC	144	4.80	144	4.80	144	4.80
CEIVER MIXER/IF +10 VDC	169	9.76	169	9.76	169	9.76
HASE LOCK LOOP (CHANNEL 9/14)	169	14.58	169	14.58	169	14.58
HASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30	145	-15.30
O. VOLTAGE (CHANNEL 8)	172	9.84	172	9.84	172	9.84
O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78	171	9.78
O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84	172	9.84
O. VOLTAGE (CHANNEL 3)	172	9.84	172	9.84	172	9.84
O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84	172	9.84
O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78	171	9.78
LO # 2 LOCK DETECT	1	0.02	1	0.02	1	0.02
LO # 1 LOCK DETECT	220	4.40	220	4.40	220	4.40
O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67	170	14.67

TEST DATA SHEET 24

Reflector Position Warm Cal Mode Section [IV] and Reflector Position Nadir Mode Section [IV] (Paragraphs 3.2.4.3.4.2 and 3.2.4.3.4.4)

BP	A1-1 Reflector			
	Para No.	Position*	Required**	Pass/Fail
WC	3.2.4.3.4.2			P
15	3.2.4.3.4.4			P
WC = Warm Cal 15 = Nadir Position				
BP	A1-2 Reflector			
	Para No.	Position*	Required**	Pass/Fail
WC	3.2.4.3.4.2			P
15	3.2.4.3.4.4			P
WC = Warm Cal 15 = Nadir Position				
* Actual counts from computer printout. Rewriting counts on this data sheet is optional.				
** Required range for instrument serial number from TDS 6 of AE-26002/1 ± 10 counts. Rewriting range on this data sheet is optional.				

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

S/N: 109

R. Haig
Test Systems Engineer

11/13/99
Date



NOV 19 99



11/19/99
Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

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4SU A1-33 A1.EXE WARM CAL MODE
5] DIGITAL A DATA ELEMENT 0000

6] DIGITAL B DATA ELEMENT 00

7] ANALOG DATA ELEMENT 00

REFLECTOR POSITIONS									
LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1
10412	10412	9	10412	10412	17	10412	10412	25	10412
10412	10412	10	10412	10412	18	10412	10412	26	10412
10412	10413	11	10413	10413	19	10413	10413	27	10413
10413	10413	12	10413	10413	20	10413	10413	28	10413
10413	10413	13	10413	10413	21	10413	10413	29	10413
10413	10412	14	10412	10412	22	10412	10412	30	10412
10412	10412	15	10412	10412	23	10412	10412	CC	0
10412	10412	16	10412	10412	24	10412	10412	WC	0
21] UP			22] DOWN						

POWER [4] ON SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

7DS 24

MSJ A1-33 A1.EXE WARM CAL MODE P1 19-NOV-99 19:33:11 SCAN NUMBER 351
5] DIGITAL A DATA ELEMENT 0000

6] DIGITAL B DATA ELEMENT 00

7] ANALOG DATA ELEMENT 00

P	REFLECTOR POSITIONS							
	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2
1	10226	10226	9	10226	10226	17	10226	10226
2	10226	10226	10	10226	10226	18	10226	10226
3	10226	10226	11	10226	10226	19	10226	10226
4	10226	10226	12	10226	10226	20	10226	10226
5	10226	10226	13	10226	10226	21	10226	10226
6	10226	10226	14	10226	10226	22	10226	10226
7	10226	10226	15	10226	10226	23	10226	10226
8	10226	10226	16	10226	10226	24	10226	10226
				[22]	DOWN			

POWER [4] ON
SELECT TOUCHSCREEN BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

MSU A1-33 A1.EXE NADIR MODE P1 19-NOV-99 19:35:11 SCAN NUMBER 366
 5] DIGITAL A DATA ELEMENT 0000
 6] DIGITAL B DATA ELEMENT 00
 7] ANALOG DATA ELEMENT 00

P	REFLECTOR POSITIONS							
	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2
1	2154	2154	9	2154	2154	17	2154	2154
2	2154	2154	10	2154	2154	18	2154	2154
3	2154	2154	11	2154	2154	19	2154	2154
4	2155	2155	12	2154	2154	20	2154	2154
5	2155	2155	13	2154	2154	21	2154	2154
6	2154	2154	14	2155	2155	22	2154	2154
7	2154	2154	15	2155	2155	23	2154	2154
8	2154	2154	16	2154	2154	24	2154	2155
21] UP				[22] DOWN				

POWER [4] ON
 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
 SELECT TOUCHSCREEN BUTTON 2

7DS 24

5] DIGITAL A DATA ELEMENT 0000

6] DIGITAL B DATA ELEMENT 00

7] ANALOG DATA ELEMENT 00

		REFLECTOR POSITIONS 2									
		LOOK 1		LOOK 2		BP		LOOK 1		LOOK 2	
		BP		LOOK 1		LOOK 2		BP		LOOK 1	
1	1969	9	1969	17	1969	25	1969	1969	1969	0	1969
2	1969	10	1969	18	1969	26	1969	1969	1969	0	1969
3	1969	11	1969	19	1969	27	1969	1969	1969	0	1969
4	1969	12	1969	20	1969	28	1969	1969	1969	0	1969
5	1969	13	1969	21	1969	29	1969	1969	1969	0	1969
6	1969	14	1969	22	1969	30	1969	1969	1969	0	1969
7	1969	15	1969	23	1969	CC	1969	1969	1969	0	1969
8	1969	16	1969	24	1969	WC	1969	1969	1969	0	1969
		[22] DOWN									

POWER [4] ON
SELECT TOUCHSCREEN BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

6 Apr 99

TEST DATA SHEET 25

Digital-A Data Output Warm Cal Mode Radiometer Data Section [V] (Paragraph 3.2.4.3.4.2)

BP	A1-2 Channel-3 (50.3 GHz)				A1-1 Channel-9 (57.290344 GHz)			
	Element (For Ref)	Measured*	Required**	Pass/Fail	Element (For Ref)	Measured*	Required**	Pass/Fail
01	0018				0030			
02	0052				0064			
03	0086				0098			
04	0120				0132			
05	0154				0166			
06	0188				0200			
07	0222				0234			
08	0256				0268			
09	0290				0302			
10	0324				0336			
11	0356				0370			
12	0392				0404			
13	0426				0438			
14	0460				0472			
15	0494				0506			
16	0528				0540			
17	0562				0574			
18	0596				0608			
19	0630				0642			
20	0664				0676			
21	0698				0710			
22	0732				0744			
23	0766				0778			
24	0800				0812			
25	0834				0846			
26	0868				0880			
27	0902				0914			
28	0936				0948			
29	0970				0982			
30	1004				1016			
CC	1038		0		1050		0	
WC	1190		0		1202		0	

* Actual counts from computer printout. Rewriting counts on this data sheet is optional.

** Required = $16,500 \pm 4000$ counts.Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 107

Test Systems Engineer

Date

NOV 19 99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

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MSU A1-J3 A1.EXE WARM CAL MODE P1 19-NOV-99 19:33:26 SCAN NUMBER 353

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BP DATA		BP DATA		BP DATA		BP DATA	
DATA		DATA		DATA		DATA	
1	16170	9	16164	17	16170	25	16166
2	16164	10	16163	18	16172	26	16162
3	16171	11	16164	19	16165	27	16168
4	16169	12	16165	20	16164	28	16165
5	16164	13	16166	21	16166	29	16167
6	16171	14	16168	22	16160	30	16168
7	16169	15	16174	23	16166	CC	0
8	16166	16	16168	24	16166	WC	
		[22] DOWN					

[21] UP

POWER [4] ON

SELECT TOUCHSCREEN BUTTON 2

SCREEN ONLY [2]

PRINT [3] FULL

[1] RETURN

728 25

5] DIGITAL A DATA ELEMENT 0000

6] DIGITAL B DATA ELEMENT 00

7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA									
CHANNEL 9									
BP	DATA	BP	DATA	BP	DATA	BP	DATA	BP	DATA
1	16434	9	16433	17	16435	25	16434		
2	16434	10	16434	18	16431	26	16433		
3	16433	11	16437	19	16433	27	16430		
4	16431	12	16437	20	16431	28	16434		
5	16434	13	16432	21	16436	29	16433		
6	16436	14	16434	22	16437	30	16433		
7	16436	15	16436	23	16434	CC	0		
8	16431	16	16435	24	16434	WC	0		
[22] DOWN									

[21] UP
POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL
SELECT TOUCHSCREEN BUTTON 2 [1] RETURN

6 Apr 99

TEST DATA SHEET 26 (Sheet 1 of 2)
Warm Cal Mode Temperature Sensors Section [VI] (Paragraph 3.2.4.3.4.2)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1090	A1-1 Warm Load 1		25 ± 15	P
1092	A1-1 Warm Load 2		25 ± 15	
1094	A1-1 Warm Load 3		25 ± 15	
1096	A1-1 Warm Load 4		25 ± 15	
1098	A1-1 Warm Load Center		25 ± 15	
1100	A1-2 Warm Load 1		25 ± 15	
1102	A1-2 Warm Load 2		25 ± 15	
1104	A1-2 Warm Load 3		25 ± 15	
1106	A1-2 Warm Load 4		25 ± 15	
1108	A1-2 Warm Load Center		25 ± 15	
1110	Local Oscillator Channel 7		25 ± 15	
1112	Local Oscillator Channel 8		25 ± 15	
1114	Local Oscillator Channel 15		25 ± 15	
1116	PLL LO #2 Channels 9-14		25 ± 15	
1118	PLL LO #1 Channels 9-14		25 ± 15	
1120	PLLO (Reference Oscillator)**/ Not used ***			
1122	Mixer I.F. Amp. Channel 3		25 ± 15	
1124	Mixer I.F. Amp. Channel 4		25 ± 15	
1126	Mixer I.F. Amp. Channel 5		25 ± 15	
1128	Mixer I.F. Amp. Channel 6		25 ± 15	
1130	Mixer I.F. Amp. Channel 7		25 ± 15	
1132	Mixer I.F. Amp. Channel 8		25 ± 15	
1134	Mixer I.F. Amp. Channels 9-14		25 ± 15	
1136	Mixer I.F. Amp. Channel 15		25 ± 15	

* Value is from the STE printout sheets. Copying data to this sheet is optional.

** For S/N 101 through 104.

*** For S/N 105 and up.

(Continued on Sheet 2)

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TEST DATA SHEET 26 (Sheet 2 of 2)
Warm Cal Mode Temperature Sensors Section [VI] (Paragraph 3.2.4.3.4.2)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1138	I.F. Amp. Channel 11-14		25 ± 15	P
1140	I.F. Amp. Channel 9		25 ± 15	
1142	I.F. Amp. Channel 10		25 ± 15	
1144	I.F. Amp. Channel 11		25 ± 15	
1146	DC/DC Converter		25 ± 15	
1148	I.F. Amp. Channel 13		25 ± 15	
1150	I.F. Amp. Channel 14		25 ± 15	
1152	I.F. Amp. Channel 12		25 ± 15	
1154	RF Shelf A1-1		25 ± 15	
1156	RF Shelf A1-2		25 ± 15	
1158	Detector Preamp Assy.		25 ± 15	
1160	Scan Motor A1-1		25 ± 15	
1162	Scan Motor A1-2		25 ± 15	
1164	Feed Horn A1-1		25 ± 15	
1166	Feed Horn A1-2		25 ± 15	
1168	R.F. Mux A1-1		25 ± 15	
1170	R.F. Mux A1-2		25 ± 15	
1172	Local Oscillator Channel 3		25 ± 15	
1174	Local Oscillator Channel 4		25 ± 15	
1176	Local Oscillator Channel 5		25 ± 15	
1178	Local Oscillator Channel 6		25 ± 15	
1180	Temp Sensor Ref Voltage Count		**	↓

* Value is from the STE printout sheets. Copying data to this sheet is optional.
** = Count of 24,552 +1765,-1308.

Circle Test: CPT , LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109
R. High 11/12/99

Test Systems Engineer

Date



NOV 19 '99



11/19/99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

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WARM CAL MODE
ELEMENT 0000

MSU A1-33 A1.EXE
[5] DIGITAL A DATA

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

IO	DIGITAL A TEMPERATURES 1 TO 16				DATA	TEMP C
	DATA	TEMP C	NO			
1	SCAN MOTOR A1-1	17845	23.28	9 LO CHANNEL 5	20933	28.30
2	SCAN MOTOR A1-2	18532	23.40	10 LO CHANNEL 6	19917	26.56
3	FEEDHORN A1-1	18766	24.46	11 LO CHANNEL 7	20237	26.97
4	FEEDHORN A1-2	19109	25.15	12 LO CHANNEL 8	20452	28.28
5	RF MUX A1-1	19808	26.00	13 LO CHANNEL 15	21234	28.31
6	RF MUX A1-2	20183	26.74	14 PLLO #2 CH 9/14	19465	25.39
7	LO CHANNEL 3	21329	28.85	15 PLLO #1 CH 9/14	22280	30.74
8	LO CHANNEL 4	21325	28.53	16 PLLO REFERENCE	32767	51.27
[21]	UP		[22]	DOWN		

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

7DS26

5] DIGITAL A DATA WARM CAL. MODE
ELEMENT 0000

6] DIGITAL B DATA ELEMENT 00

7] ANALOG DATA ELEMENT 00

IO	DIGITAL A TEMPERATURES 17 TO 32				
	DATA	TEMP C	NO	DATA	TEMP C
7	MIXER IF CH 3	20848	25	IF AMP CH 11/14	20668
8	MIXER IF CH 4	20871	26	IF AMP CH 9	20685
9	MIXER IF CH 5	20548	27	IF AMP CH 10	20842
10	MIXER IF CH 6	20019	28	IF AMP CH 11	19726
11	MIXER IF CH 7	19999	29	DC/DC CONVERTER	21391
12	MIXER IF CH 8	20715	30	IF AMP CH 13	19755
13	MIXER IF CH 9/14	19956	31	IF AMP CH 14	19865
14	MIXER IF CH 15	20726	32	IF AMP CH 12	19648
21	UP	[22]	DOWN		

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

MSU A1-33 A1.EXE WARM CAL MODE
[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

DIGITAL A TEMPERATURES 31 TO 46				
NO	DATA	TEMP C	NO	DATA
31	IF AMP CH 14	26.39	39	A1-1 WARM LOAD 4
32	IF AMP CH 12	25.98	40	A1-1 WARM LOAD C
33	RF SHELF A1-1	26.92	41	A1-2 WARM LOAD 1
34	RF SHELF A1-2	26.88	42	A1-2 WARM LOAD 2
35	DETECTOR/PREAMP	24.85	43	A1-2 WARM LOAD 3
36	A1-1 WARM LOAD 1	23.48	44	A1-2 WARM LOAD 4
37	A1-1 WARM LOAD 2	23.41	45	A1-2 WARM LOAD C
38	A1-1 WARM LOAD 3	23.51		THERMAL REFERENCE
[21] UP		[22] DOWN		
				23.45
				23.59
				24.02
				23.95
				24.08
				24.10
				24.00

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

6 Apr 99

TEST DATA SHEET 27

Digital-A Data Output Cold Cal Mode Synch Sequence,
Unit I.D./Serial Number and Digital-B Serial Data Verification
Sections [I], [II], and [III] (Paragraph 3.2.4.3.4.3)

Step	Element (For Ref)	Description	Recorded Value	Required Value	Pass/Fail
[I]	0001	Sync Sequence Byte 1	255	255	P
	0002	Sync Sequence Byte 2	255	255	
	0003	Sync Sequence Byte 3	255	255	
[II]	0004	Unit I.D. and Serial N	33	*	
[III]	0005	Digital-B Data Byte 1	8	8	↓
	0006	Digital-B Data Byte 2	14	14	
	0007	Digital-B Data Byte 3	0	0	
	0008	Digital-B Data Byte 4	0	0	

* AMSU A1 Identification Words
(data entered in decimal system)

Binary

Decimal

AMSU-A1 S/N 101

00000001

1

AMSU-A1 S/N 102

00000101

5

AMSU-A1 S/N 103

00001001

9

AMSU-A1 S/N 104

00001101

13

AMSU-A1 S/N 105

00010001

17

AMSU-A1 S/N 106

00010101

21

AMSU-A1 S/N 107

00011001

25

AMSU-A1 S/N 108

00011101

29

AMSU-A1 S/N 109

00100001

33

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order:

748613

S/N:

109

Test Systems Engineer

Date



NOV 19 99



11/19/99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

1

2

3

AMSU A1-33 A1.EXE COLD CAL MODE P1 19-NOV-99 19:43:41 SCAN NUMBER 430
 [5] DIGITAL A DATA ELEMENT 0000
 [6] DIGITAL B DATA ELEMENT 00
 [7] ANALOG DATA ELEMENT 00

COMMANDS
 [9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = YES [15]
 [10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
 [11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = NO [17]
 [12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL0 # 1 [18]
 [13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
 [14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]
 POWER [4] ON
 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
 SELECT TOUCHSCREEN BUTTON 3

TDS 27

S/O: 748613 OP: 0810 1ST CPT
 P/N: 1331720-3-PI SN: 109

TEST ENG: P. Hill DATE: 11/19/99

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ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE BYTE 1	11111111	572	COLD CAL SAMPLE 17	16359
2	SYNC SEQUENCE BYTE 2	11111111	574	CH 8	16405
3	SYNC SEQUENCE BYTE 3	11111111	576	CH 9	15949
4	UNIT ID AND SERIAL NO	00100001	578	CH 10	17263
5	DIGITAL B DATA BYTE 1	00001000	580	CH 11	17016
6	DIGITAL B DATA BYTE 2	00001110	582	CH 12	19786
7	DIGITAL B DATA BYTE 3	00000000	584	CH 13	17751
8	DIGITAL B DATA BYTE 4	00000000	586	CH 14	14824
10	REFLECTOR 1 POSITION	6018	588	CH 15	6018
12	REFLECTOR 2 POSITION	5833	590	REFLECTOR 1 POSITION 18	5833
14	REFL 1 POS 1 2ND LOOK	6018	592	REFLECTOR 2 POSITION 18	6018
16	REFL 2 POS 1 2ND LOOK	5833	594	REFL 1 POS 18 2ND LOOK	5833
18	COLD CAL SAMPLE 1	16176	596	REFL 2 POS 18 2ND LOOK	16182
20	CH 3	16245	598	COLD CAL SAMPLE 18	16243
22	CH 4	17367	600	CH 3	17372
24	CH 5	16739	602	CH 4	16737
26	CH 6	16586	604	CH 5	16582
28	CH 7	16365	606	CH 6	16361
30	CH 8	16401	608	CH 7	16403
32	CH 9	15948	610	CH 8	15947
34	CH 10	17261	612	CH 9	17256
36	CH 11	17020	614	CH 10	17016
38	CH 12	19794	616	CH 11	19788
40	CH 13	17731	618	CH 12	17758
42	CH 14	14823	620	CH 13	14824
44	CH 15	6018	622	CH 14	6018
46	REFLECTOR 1 POSITION	5833	624	REFLECTOR 1 POSITION 19	5833
48	REFLECTOR 2 POSITION	6018	626	REFLECTOR 2 POSITION 19	6018
50	REFL 1 POS 2 2ND LOOK	5833	628	REFL 1 POS 19 2ND LOOK	5833
52	REFL 2 POS 2 2ND LOOK	16175	630	REFL 2 POS 19 2ND LOOK	16179
54	COLD CAL SAMPLE 2	16245	632	COLD CAL SAMPLE 19	16245
56	CH 3	17372	634	CH 3	17373
58	CH 4	16739	636	CH 4	16740
60	CH 5	16585	638	CH 5	16586
62	CH 6	16362	640	CH 6	16357
64	CH 7	16403	642	CH 7	16402
66	CH 8	15947	644	CH 8	15948
68	CH 9	17263	646	CH 9	17261
70	CH 10	17009	648	CH 10	17014
72	CH 11	19801	650	CH 11	19795
74	CH 12	17742	652	CH 12	17745
76	CH 13	14823	654	CH 13	14824
78	CH 14	6018	656	CH 14	6018
80	REFLECTOR 1 POSITION	5833	658	REFLECTOR 1 POSITION 20	5833
82	REFLECTOR 2 POSITION	6018	660	REFLECTOR 2 POSITION 20	6018
84	REFL 1 POS 3 2ND LOOK	5834	662	REFL 1 POS 20 2ND LOOK	5834
86	REFL 2 POS 3 2ND LOOK	16174	664	REFL 2 POS 20 2ND LOOK	16181
88	COLD CAL SAMPLE 3	16246	666	COLD CAL SAMPLE 20	16246
90	CH 3	17369	668	CH 3	17376
92	CH 4	16738	670	CH 4	16738

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16584	672	CH 7	16582
96	CH 8	16360	674	CH 8	16361
98	CH 9	16404	676	CH 9	16401
100	CH 10	15948	678	CH 10	15947
102	CH 11	17258	680	CH 11	17260
104	CH 12	17009	682	CH 12	17021
106	CH 13	17996	684	CH 13	17988
108	CH 14	17754	686	CH 14	17744
110	CH 15	14823	688	CH 15	14824
112	REFLECTOR 1 POSITION	6018	690	REFLECTOR 1 POSITION 21	6018
114	REFLECTOR 2 POSITION	5834	692	REFLECTOR 2 POSITION 21	5834
116	REFL 1 POS 4 2ND LOOK	6018	694	REFL 1 POS 21 2ND LOOK	6018
118	REFL 2 POS 4 2ND LOOK	5833	696	REFL 2 POS 21 2ND LOOK	5833
120	COLD CAL SAMPLE 4	16179	698	COLD CAL SAMPLE 21	16178
122	CH 3	16243	700	CH 3	16242
124	CH 4	17368	702	CH 4	17370
126	CH 5	16739	704	CH 5	16735
128	CH 6	16584	706	CH 6	16583
130	CH 7	16358	708	CH 7	16363
132	CH 8	16403	710	CH 8	16401
134	CH 9	15944	712	CH 9	15948
136	CH 10	17254	714	CH 10	17261
138	CH 11	17015	716	CH 11	17008
140	CH 12	19795	718	CH 12	19795
142	CH 13	17766	720	CH 13	17768
144	CH 14	14823	722	CH 14	14824
146	REFLECTOR 1 POSITION	6018	724	REFLECTOR 1 POSITION 22	6018
148	REFLECTOR 2 POSITION	5833	726	REFLECTOR 2 POSITION 22	5833
150	REFL 1 POS 5 2ND LOOK	6018	728	REFL 1 POS 22 2ND LOOK	6018
152	REFL 2 POS 5 2ND LOOK	5833	730	REFL 2 POS 22 2ND LOOK	5833
154	COLD CAL SAMPLE 5	16182	732	COLD CAL SAMPLE 22	16177
156	CH 3	16243	734	CH 3	16242
158	CH 4	17373	736	CH 4	17367
160	CH 5	16738	738	CH 5	16742
162	CH 6	16585	740	CH 6	16582
164	CH 7	16357	742	CH 7	16359
166	CH 8	16401	744	CH 8	16404
168	CH 9	15945	746	CH 9	15950
170	CH 10	17255	748	CH 10	17260
172	CH 11	17005	750	CH 11	17021
174	CH 12	19813	752	CH 12	19787
176	CH 13	17726	754	CH 13	17751
178	CH 14	14823	756	CH 14	14824
180	REFLECTOR 1 POSITION	6018	758	REFLECTOR 1 POSITION 23	6018
182	REFLECTOR 2 POSITION	5833	760	REFLECTOR 2 POSITION 23	5833
184	REFL 1 POS 6 2ND LOOK	6018	762	REFL 1 POS 23 2ND LOOK	6018
186	REFL 2 POS 6 2ND LOOK	5833	764	REFL 2 POS 23 2ND LOOK	5833
188	COLD CAL SAMPLE 6	16181	766	COLD CAL SAMPLE 23	16181
190	CH 3	16241	768	CH 3	16244
192	CH 4	17370	770	CH 4	17371

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16738	772		16737
196	CH 7	16584	774		16583
198	CH 8	16358	776		16355
200	CH 9	16403	778		16401
202	CH 10	15949	780		15951
204	CH 11	17260	782		17265
206	CH 12	17009	784		17011
208	CH 13	19805	786		19791
210	CH 14	17763	788		17759
212	CH 15	14824	790		14824
214	REFLECTOR 1 POSITION	6018	792	REFLECTOR 1 POSITION 24	6018
216	REFLECTOR 2 POSITION	5833	794	REFLECTOR 2 POSITION 24	5833
218	REFL 1 POS 7 2ND LOOK	6018	796	REFL 1 POS 24 2ND LOOK	6018
220	REFL 2 POS 7 2ND LOOK	5834	798	REFL 2 POS 24 2ND LOOK	5833
222	COLD CAL SAMPLE 7	16179	800	COLD CAL SAMPLE 24	16181
224	CH 3	16245	802	CH 4	16243
226	CH 4	17370	804	CH 5	17369
228	CH 5	16743	806	CH 6	16738
230	CH 6	16585	808	CH 7	16585
232	CH 7	16354	810	CH 8	16357
234	CH 8	16404	812	CH 9	16405
236	CH 9	15949	814	CH 10	15946
238	CH 10	17259	816	CH 11	17256
240	CH 11	17014	818	CH 12	17013
242	CH 12	19799	820	CH 13	19789
244	CH 13	17725	822	CH 14	17738
246	CH 14	14824	824	CH 15	14824
248	REFLECTOR 1 POSITION	6018	826	REFLECTOR 1 POSITION 25	6018
250	REFLECTOR 2 POSITION	5834	828	REFLECTOR 2 POSITION 25	5833
252	REFL 1 POS 8 2ND LOOK	6018	830	REFL 1 POS 25 2ND LOOK	6018
254	REFL 2 POS 8 2ND LOOK	5833	832	REFL 2 POS 25 2ND LOOK	5834
256	COLD CAL SAMPLE 8	16182	834	COLD CAL SAMPLE 25	16175
258	CH 3	16243	836	CH 4	16241
260	CH 4	17372	838	CH 5	17368
262	CH 5	16739	840	CH 6	16740
264	CH 6	16583	842	CH 7	16586
266	CH 7	16361	844	CH 8	16358
268	CH 8	16402	846	CH 9	16404
270	CH 9	15948	848	CH 10	15948
272	CH 10	17263	850	CH 11	17258
274	CH 11	17008	852	CH 12	17021
276	CH 12	19812	854	CH 13	19792
278	CH 13	17743	856	CH 14	17744
280	CH 14	14823	858	CH 15	14823
282	REFLECTOR 1 POSITION	6018	860	REFLECTOR 1 POSITION 26	6018
284	REFLECTOR 2 POSITION	5833	862	REFLECTOR 2 POSITION 26	5834
286	REFL 1 POS 9 2ND LOOK	6018	864	REFL 1 POS 26 2ND LOOK	6018
288	REFL 2 POS 9 2ND LOOK	5833	866	REFL 2 POS 26 2ND LOOK	5833
290	COLD CAL SAMPLE 9	16179	868	COLD CAL SAMPLE 26	16179
292	CH 3	16245	870	CH 4	16245

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17367	872	CH 5	17370
296	CH 6	16738	874	CH 6	16739
298	CH 7	16587	876	CH 7	16584
300	CH 8	16354	878	CH 8	16357
302	CH 9	16403	880	CH 9	16400
304	CH 10	15941	882	CH 10	15949
306	CH 11	17263	884	CH 11	17258
308	CH 12	17014	886	CH 12	17018
310	CH 13	19795	888	CH 13	19791
312	CH 14	17750	890	CH 14	17761
314	CH 15	14823	892	CH 15	14824
316	REFLECTOR 1 POSITION 10	6018	894	REFLECTOR 1 POSITION 27	6018
318	REFLECTOR 2 POSITION 10	5833	896	REFLECTOR 2 POSITION 27	5833
320	REFL 1 POS 10 2ND LOOK	6018	898	REFL 1 POS 27 2ND LOOK	6018
322	REFL 2 POS 10 2ND LOOK	5833	900	REFL 2 POS 27 2ND LOOK	5833
324	COLD CAL SAMPLE 10	16182	902	COLD CAL SAMPLE 27	16179
326	CH 3	16246	904	CH 3	16242
328	CH 4	17371	906	CH 4	17369
330	CH 5	16737	908	CH 5	16740
332	CH 6	16584	910	CH 6	16585
334	CH 7	16357	912	CH 7	16355
336	CH 8	16405	914	CH 8	16401
338	CH 9	15951	916	CH 9	15945
340	CH 10	17260	918	CH 10	17260
342	CH 11	17014	920	CH 11	17015
344	CH 12	19808	922	CH 12	19803
346	CH 13	17731	924	CH 13	17738
348	CH 14	14824	926	CH 14	14823
350	CH 15	6018	928	CH 15	6018
352	REFLECTOR 1 POSITION 11	5833	930	REFLECTOR 1 POSITION 28	5833
354	REFLECTOR 2 POSITION 11	6018	932	REFLECTOR 2 POSITION 28	6018
356	REFL 1 POS 11 2ND LOOK	5834	934	REFL 1 POS 28 2ND LOOK	5833
358	REFL 2 POS 11 2ND LOOK	16185	936	REFL 2 POS 28 2ND LOOK	16179
360	COLD CAL SAMPLE 11	16245	938	COLD CAL SAMPLE 28	16247
362	CH 3	17368	940	CH 3	17371
364	CH 4	16739	942	CH 4	16740
366	CH 5	16584	944	CH 5	16588
368	CH 6	16361	946	CH 6	16361
370	CH 7	16405	948	CH 7	16406
372	CH 8	15946	950	CH 8	15947
374	CH 9	17258	952	CH 9	17262
376	CH 10	17009	954	CH 10	17013
378	CH 11	19808	956	CH 11	19799
380	CH 12	17742	958	CH 12	17770
382	CH 13	14824	960	CH 13	14824
384	CH 14	6018	962	CH 14	6018
386	CH 15	5834	964	CH 15	5833
388	REFLECTOR 1 POSITION 12	5834	966	REFLECTOR 1 POSITION 29	5833
390	REFLECTOR 2 POSITION 12	6018	968	REFLECTOR 2 POSITION 29	6018
392	REFL 1 POS 12 2ND LOOK	5834	970	REFL 1 POS 29 2ND LOOK	5833
	REFL 2 POS 12 2ND LOOK	16185		REFL 2 POS 29 2ND LOOK	16178
	COLD CAL SAMPLE 12			COLD CAL SAMPLE 29	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH	16244	972	CH	16240
396	CH	17370	974	CH	17369
398	CH	16739	976	CH	16738
400	CH	16586	978	CH	16584
402	CH	16361	980	CH	16363
404	CH	16404	982	CH	16404
406	CH	15945	984	CH	15950
408	CH	17262	986	CH	17259
410	CH	17019	988	CH	17015
412	CH	19805	990	CH	19792
414	CH	17738	992	CH	17741
416	CH	14824	994	CH	14825
418	REFLECTOR 1 POSITION 13	6018	996	REFLECTOR 1 POSITION 30	6018
420	REFLECTOR 2 POSITION 13	5833	998	REFLECTOR 2 POSITION 30	5834
422	REFL 1 POS 13 2ND LOOK	6018	1000	REFL 1 POS 30 2ND LOOK	6018
424	REFL 2 POS 13 2ND LOOK	5833	1002	REFL 2 POS 30 2ND LOOK	5834
426	COLD CAL SAMPLE 13	16180	1004	COLD CAL SAMPLE 30	16179
428	CH	16243	1006	CH	16243
430	CH	17375	1008	CH	17369
432	CH	16739	1010	CH	16739
434	CH	16587	1012	CH	16588
436	CH	16353	1014	CH	16357
438	CH	16402	1016	CH	16408
440	CH	15945	1018	CH	15948
442	CH	17261	1020	CH	17261
444	CH	17014	1022	CH	17015
446	CH	19800	1024	CH	19799
448	CH	17739	1026	CH	17727
450	CH	14824	1028	CH	14824
452	REFLECTOR 1 POSITION 14	6018	1030	REFLECTOR 1 COLD CAL POS	0E
454	REFLECTOR 2 POSITION 14	5833	1032	REFLECTOR 2 COLD CAL POS	0E
456	REFL 1 POS 14 2ND LOOK	6018	1034	REFL 1 COLD CAL 2ND LOOK	0E
458	REFL 2 POS 14 2ND LOOK	5833	1036	REFL 2 COLD CAL 2ND LOOK	0E
460	COLD CAL SAMPLE 14	16180	1038	COLD CAL DATA 1	0
462	CH	16242	1040	CH	0
464	CH	17368	1042	CH	0
466	CH	16741	1044	CH	0
468	CH	16585	1046	CH	0
470	CH	16361	1048	CH	0
472	CH	16404	1050	CH	0
474	CH	15947	1052	CH	0
476	CH	17264	1054	CH	0
478	CH	17019	1056	CH	0
480	CH	19799	1058	CH	0
482	CH	17745	1060	CH	0
484	CH	14824	1062	CH	0
486	REFLECTOR 1 POSITION 15	6018	1064	COLD CAL DATA 2	0
488	REFLECTOR 2 POSITION 15	5833	1066	CH	0
490	REFL 1 POS 15 2ND LOOK	6018	1068	CH	0
492	REFL 2 POS 15 2ND LOOK	5833	1070	CH	0

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
090	SCAN MOTOR A1-1	17801	23.20	
092	SCAN MOTOR A1-2	18486	23.32	
094	FEEDHORN A1-1	18953	24.82	
096	FEEDHORN A1-2	19405	25.71	
098	RF MUX A1-1	20163	26.67	
100	RF MUX A1-2	20667	27.66	
102	LOCAL OSCILLATOR CHANNEL 3	21819	29.79	
104	LOCAL OSCILLATOR CHANNEL 4	21810	29.46	
106	LOCAL OSCILLATOR CHANNEL 5	21388	29.17	
108	LOCAL OSCILLATOR CHANNEL 6	20127	26.96	
110	LOCAL OSCILLATOR CHANNEL 7	20593	27.64	
112	LOCAL OSCILLATOR CHANNEL 8	20906	29.15	
114	LOCAL OSCILLATOR CHANNEL 15	21727	29.26	
116	PLL LO #2 CHANNELS 9 THROUGH 14	19775	25.97	
118	PLL LO #1 CHANNELS 9 THROUGH 14	22916	31.96	
120	SPARE (NOT USED)	32767	51.27	
122	MIXER/IF AMPLIFIER CHANNEL 3	21327	28.04	
124	MIXER/IF AMPLIFIER CHANNEL 4	21364	28.31	
126	MIXER/IF AMPLIFIER CHANNEL 5	21034	28.06	
128	MIXER/IF AMPLIFIER CHANNEL 6	20360	27.13	
130	MIXER/IF AMPLIFIER CHANNEL 7	20391	27.43	
132	MIXER/IF AMPLIFIER CHANNEL 8	21204	28.33	
134	MIXER/IF AMPLIFIER CH 9 THRU 14	20293	26.50	
136	MIXER/IF AMPLIFIER CHANNEL 15	21158	29.11	
138	IF AMPLIFIER CHANNEL 11 THRU 14	21167	28.72	
140	IF AMPLIFIER CHANNEL 9	21188	28.82	
142	IF AMPLIFIER CHANNEL 10	21348	28.82	
144	IF AMPLIFIER CHANNEL 11	20033	26.61	
146	DC/DC CONVERTER	21961	30.16	
148	IF AMPLIFIER CHANNEL 13	20056	26.63	
150	IF AMPLIFIER CHANNEL 14	20168	26.94	
152	IF AMPLIFIER CHANNEL 12	19953	26.55	
154	RF SHELF A1-1	20123	27.72	
156	RF SHELF A1-2	20565	27.74	
158	DETECTOR/PREAMPLIFIER ASSEMBLY	19184	25.30	
160	A1-1 WARM LOAD 1	23570	23.47	
162	A1-1 WARM LOAD 2	23323	23.41	
164	A1-1 WARM LOAD 3	23556	23.49	
166	A1-1 WARM LOAD 4	23489	23.44	
168	A1-1 WARM LOAD CENTER	23576	23.58	
170	A1-2 WARM LOAD 1	23645	24.02	
172	A1-2 WARM LOAD 2	23799	23.96	
174	A1-2 WARM LOAD 3	23956	24.08	
176	A1-2 WARM LOAD 4	23734	24.11	
178	A1-2 WARM LOAD CENTER	23627	24.00	
180	TEMP SENSOR REFERENCE VOLTAGE	25322		

DESCRIPTION

STATUS

STATUS

STATUS

DESCRIPTION	STATUS	STATUS	STATUS
CANNER A1-1 POWER	ON	ON	ON
CANNER A1-2 POWER	ON	ON	ON
LL POWER	PLLO # 1	PLLO # 1	PLLO # 1
NTENNA IN WARM CAL POSITION MODE	NO	NO	NO
NTENNA IN COLD CAL POSITION MODE	YES	YES	YES
NTENNA IN NADIR POSITION MODE	NO	NO	NO
NTENNA IN FULL SCAN MODE	NO	NO	NO
IRVIVAL HEATER POWER	OFF	OFF	OFF
ODULE POWER	CONNECT	CONNECT	CONNECT
OLD CAL POSITION MSB	ZERO	ZERO	ZERO
OLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA

DESCRIPTION	VALUE	DEG C	VALUE	DEG C	VALUE	DEG C
1-1 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0	214	18.0
1-2 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4	215	19.4
1-1 RF SHELF TEMPERATURE	215	19.4	215	19.4	215	19.4
1-2 RF SHELF TEMPERATURE	217	22.1	217	22.1	218	23.4
1-1 WARM LOAD TEMPERATURE	214	18.0	214	18.0	214	18.0
1-2 WARM LOAD TEMPERATURE	215	19.4	215	19.4	215	19.4

DESCRIPTION	VALUE	AMPS/ VOLTS	VALUE	AMPS/ VOLTS	VALUE	AMPS/ VOLTS
1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	2	0.93	2	0.93	2	0.93
1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	2	0.93	2	0.93	2	0.93
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	169	14.58	169	14.58	169	14.58
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	147	-15.20	147	-15.20	147	-15.20
RECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	145	4.83	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	144	4.80	144	4.80	144	4.80
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76	169	9.76
PHASE LOCK LOOP (CHANNEL 9/14)	169	14.58	169	14.58	169	14.58
PHASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30	144	-15.35
PHASE LOCK LOOP (CHANNEL 8)	171	9.78	171	9.78	171	9.78
PHASE LOCK LOOP (CHANNEL 7)	171	9.78	171	9.78	171	9.78
PHASE LOCK LOOP (CHANNEL 6)	172	9.84	172	9.84	172	9.84
PHASE LOCK LOOP (CHANNEL 3)	171	9.78	171	9.78	172	9.84
PHASE LOCK LOOP (CHANNEL 4)	173	9.90	173	9.90	172	9.84
PHASE LOCK LOOP (CHANNEL 5)	171	9.78	171	9.78	171	9.78
PHASE LOCK LOOP (CHANNEL 15)	1	0.02	1	0.02	1	0.02
PHASE LOCK LOOP (CHANNEL 15)	219	4.38	219	4.38	219	4.38
PHASE LOCK LOOP (CHANNEL 15)	170	14.67	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

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TEST DATA SHEET 28 (Sheet 1 of 2)

Reflector Position Warm Cal Mode Section [IV], Reflector Position Cold Cal Mode Section [IV], and Reflector Position Nadir Mode Section [IV] (Paragraphs 3.2.4.3.4.2, 3.2.4.3.4.3, and 3.2.4.3.4.4)

BP	A1-1 Reflector			
	Para No.	Position*	Required**	Pass/Fail
CC	3.2.4.3.4.3, Step 4			
	a.			P
	b.			P
	c.			P
	d.			P

CC = Cold Cal

* Actual counts from computer printout. Rewriting counts on this data sheet is optional.

** Required range for instrument serial number from TDS 6 of AE-26002/1 ± 10 counts. Rewriting range on this data sheet is optional.

3.2.4.3.4.3, Step 4 Substep	MSB	LSB
a.	0	0
b.	0	1
c.	1	0
d.	1	1

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

S/N: 109

R. Heig 11/19/99
Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

6 Apr 99

TEST DATA SHEET 28 (Sheet 2 of 2)

Reflector Position Warm Cal Mode Section [IV], Reflector Position Cold Cal Mode Section [IV], and Reflector Position Nadir Mode Section [IV (Paragraphs 3.2.4.3.4.2, 3.2.4.3.4.3, and 3.2.4.3.4.4)]

BP	A1-2 Reflector			
	Para No.	Position*	Required**	Pass/Fail
CC	3.2.4.3.4.3, Step 4			
	a.			P
	b.			P
	c.			P
	d.			P

CC = Cold Cal

* Actual counts from computer printout. Rewriting counts on this data sheet is optional.

** Required range for instrument serial number from TDS 6 of AE-26002/1 ± 10 counts. Rewriting range on this data sheet is optional.

3.2.4.3.4.3, Step 4 Substep	MSB	LSB
a.	0	0
b.	0	1
c.	1	0
d.	1	1

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109R. Hargis 11/19/99
Test Systems Engineer Date

NOV 19 99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

5] DIGITAL A DATA ELEMENT 0000

6] DIGITAL B DATA ELEMENT 00

7] ANALOG DATA ELEMENT 00

REFLECTOR POSITIONS									
		1		2		3		4	
BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP
1	6018	6018	9	6018	6018	17	6018	6018	25
2	6018	6018	10	6018	6018	18	6018	6018	26
3	6018	6018	11	6018	6018	19	6018	6018	27
4	6018	6018	12	6018	6018	20	6018	6018	28
5	6018	6018	13	6018	6018	21	6018	6018	29
6	6018	6018	14	6018	6018	22	6018	6018	30
7	6018	6018	15	6018	6018	23	6018	6018	CC
8	6018	6018	16	6018	6018	24	6018	6018	WC
21] UP		[22] DOWN						

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

7DS28

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

REFLECTOR POSITIONS									
BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP
1	5833	5834	9	5833	5833	17	5833	5833	25
2	5834	5833	10	5833	5833	18	5833	5833	26
3	5833	5833	11	5834	5834	19	5833	5833	27
4	5833	5833	12	5833	5833	20	5834	5834	28
5	5833	5834	13	5833	5833	21	5833	5833	29
6	5834	5833	14	5833	5833	22	5833	5833	30
7	5833	5833	15	5834	5834	23	5833	5833	CC
8	5833	5833	16	5833	5833	24	5834	5834	WC
[21] UP				[22] DOWN					

POWER [4] ON SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT TOUCHSCREEN BUTTON 2

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

REFLECTOR POSITIONS									
		1		2		3		4	
3P	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP
1	5941	5942	9	5941	5941	17	5941	5942	25
2	5941	5942	10	5941	5941	18	5941	5941	26
3	5941	5941	11	5941	5941	19	5941	5941	27
4	5941	5941	12	5941	5941	20	5941	5941	28
5	5942	5941	13	5941	5942	21	5941	5941	29
6	5941	5941	14	5941	5941	22	5941	5942	30
7	5941	5941	15	5941	5941	23	5941	5941	CC
8	5941	5941	16	5941	5941	24	5941	5941	WC
[21] UP				[22] DOWN					

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

REFLECTOR POSITIONS									
		2		1		2		1	
BP		LOOK 1		LOOK 2		BP		LOOK 1	
LOOK 1		LOOK 2		BP		LOOK 1		LOOK 2	
1	5759	5759	5759	9	5759	17	5759	25	5759
2	5759	5759	5759	10	5759	18	5759	26	5759
3	5759	5759	5759	11	5759	19	5759	27	5759
4	5759	5759	5759	12	5759	20	5759	28	5759
5	5759	5759	5759	13	5759	21	5759	29	5759
6	5759	5759	5759	14	5759	22	5759	30	5759
7	5759	5759	5759	15	5759	23	5759	CC	0
8	5759	5759	5759	16	5759	24	5759	WC	0
[21] UP		[22] DOWN							

POWER [4] ON SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT TOUCHSCREEN BUTTON 2

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

REFLECTOR POSITIONS 1									
3P	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP
1	5864	5864	9	5864	5864	17	5864	5863	25
2	5864	5864	10	5864	5864	18	5864	5864	26
3	5864	5864	11	5864	5863	19	5864	5864	27
4	5864	5864	12	5864	5864	20	5864	5864	28
5	5864	5864	13	5864	5864	21	5864	5864	29
6	5864	5864	14	5864	5863	22	5864	5864	30
7	5864	5864	15	5864	5864	23	5864	5864	CC
8	5863	5864	16	5864	5864	24	5864	5864	WC
[21] UP				[22] DOWN					

POWER [4] ON
 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
 SELECT TOUCHSCREEN BUTTON 2

MSU A1-33 A1.EXE COLD CAL MODE P1 19-NOV-99 19:48:07 SCAN NUMBER 463
 [5] DIGITAL A DATA ELEMENT 0000
 [6] DIGITAL B DATA ELEMENT 00
 [7] ANALOG DATA ELEMENT 00

REFLECTOR POSITIONS									
	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP
1	5681	5682	9	5681	5682	17	5681	5681	25
2	5681	5681	10	5681	5682	18	5681	5681	26
3	5681	5681	11	5681	5682	19	5681	5681	27
4	5681	5682	12	5682	5681	20	5681	5682	28
5	5682	5681	13	5681	5681	21	5681	5682	29
6	5681	5681	14	5681	5682	22	5681	5681	30
7	5681	5681	15	5682	5681	23	5681	5681	CC
8	5682	5681	16	5681	5682	24	5681	5682	WC
[21] UP				[22] DOWN					

POWER [4] ON
 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
 SELECT TOUCHSCREEN BUTTION 2

5] DIGITAL A DATA ELEMENT 0000

6] DIGITAL B DATA ELEMENT 00

7] ANALOG DATA ELEMENT 00

REFLECTOR POSITIONS									
		1		2		1		2	
P	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP
1	5714	5714	9	5714	5714	17	5713	5713	25
2	5713	5713	10	5713	5713	18	5713	5713	26
3	5714	5713	11	5713	5713	19	5713	5713	27
4	5713	5713	12	5713	5714	20	5713	5713	28
5	5713	5713	13	5713	5713	21	5714	5714	29
6	5714	5714	14	5714	5713	22	5713	5713	30
7	5713	5713	15	5713	5713	23	5713	5713	CC
8	5713	5713	16	5713	5713	24	5713	5713	WC
21] UP			[22] DOWN					

POWER [4] ON
 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
 SELECT TOUCHSCREEN BUTTON 2

AMSU A1-33 A1.EXE COLD CAL MODE P1 19-NOV-99 19:49:03 SCAN NUMBER 470
 [5] DIGITAL A DATA ELEMENT 0000
 [6] DIGITAL B DATA ELEMENT 00
 [7] ANALOG DATA ELEMENT 00

		REFLECTOR POSITIONS						
		2			1			
3P	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2	BP	LOOK 1	LOOK 2
1	5532	5532	9	5532	5532	17	5532	5532
2	5532	5532	10	5532	5532	18	5532	5532
3	5532	5532	11	5532	5532	19	5532	5532
4	5532	5532	12	5532	5532	20	5532	5532
5	5532	5532	13	5532	5532	21	5532	5532
6	5532	5532	14	5532	5532	22	5532	5532
7	5532	5532	15	5532	5532	23	5532	5532
8	5532	5532	16	5532	5532	24	5532	5532
[21] UP				[22] DOWN				

POWER [4] ON
 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
 SELECT TOUCHSCREEN BUTTON 2

TEST DATA SHEET 29

Digital-A Data Output Cold Cal Mode Radiometer Data Section [V] (Paragraph 3.2.4.3.4.3)

Condition: Cold Cal Position MSB=0 and Cold Cal Position LSB=0

BP	A1-2 Channel-3 (50.3 GHz)				A1-1 Channel-9 (57.290344 GHz)			
	Element (For Ref)	Measured*	Required**	Pass/Fail	Element (For Ref)	Measured*	Required**	Pass/Fail
01	0018			P	0030			P
02	0052				0064			
03	0086				0098			
04	0120				0132			
05	0154				0166			
06	0188				0200			
07	0222				0234			
08	0256				0268			
09	0290				0302			
10	0324				0336			
11	0356				0370			
12	0392				0404			
13	0426				0438			
14	0460				0472			
15	0494				0506			
16	0528				0540			
17	0562				0574			
18	0596				0608			
19	0630				0642			
20	0664				0676			
21	0698				0710			
22	0732				0744			
23	0766				0778			
24	0800				0812			
25	0834				0846			
26	0868				0880			
27	0902				0914			
28	0936				0948			
29	0970				0982			
30	1004				1016			
CC	1038		0		1050		0	
WC	1190		0		1202		0	

* Actual counts from computer printout. Rewriting counts on this data sheet is optional.

** Required = 16,500 ± 4000 counts.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

S/N: 109

Test Systems Engineer

Date



NOV 19 99



11/19/99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

MSU A1-33 A1.EXE COLD CAL MODE P1 19-NOV-99 19:44:35 SCAN NUMBER 436
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BP		DATA		BP		DATA		BP		DATA	
				CHANNEL		BP		DATA		BP	
1	16183	9	16181	17	16178	25	16176				
2	16177	10	16175	18	16174	26	16175				
3	16178	11	16178	19	16178	27	16177				
4	16178	12	16177	20	16178	28	16186				
5	16180	13	16176	21	16180	29	16181				
6	16181	14	16178	22	16173	30	16174				
7	16177	15	16180	23	16178	CC	0				
8	16180	16	16183	24	16178	WC	0				
		[22]		DOWN							

[21] UP

POWER [4] ON SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

7DS 29

[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA									
CHANNEL 9									
BP	DATA	BP	DATA	BP	DATA	BP	DATA	BP	DATA
1	16401	9	16403	17	16400	25	16401		
2	16404	10	16400	18	16405	26	16401		
3	16404	11	16402	19	16401	27	16402		
4	16403	12	16401	20	16402	28	16405		
5	16404	13	16400	21	16404	29	16401		
6	16399	14	16400	22	16399	30	16399		
7	16402	15	16402	23	16398	CC	0		
8	16401	16	16401	24	16405	WC	0		
[22] DOWN									

[21] UP
POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL
SELECT TOUCHSCREEN BUTTON 2 [1] RETURN

TEST DATA SHEET 30 (Sheet 1 of 2)
Cold Cal Mode Temperature Sensors Section [VI] (Paragraph 3.2.4.3.4.3)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1090	A1-1 Warm Load 1		25 ± 15	P
1092	A1-1 Warm Load 2		25 ± 15	
1094	A1-1 Warm Load 3		25 ± 15	
1096	A1-1 Warm Load 4		25 ± 15	
1098	A1-1 Warm Load Center		25 ± 15	
1100	A1-2 Warm Load 1		25 ± 15	
1102	A1-2 Warm Load 2		25 ± 15	
1104	A1-2 Warm Load 3		25 ± 15	
1106	A1-2 Warm Load 4		25 ± 15	
1108	A1-2 Warm Load Center		25 ± 15	
1110	Local Oscillator Channel 7		25 ± 15	
1112	Local Oscillator Channel 8		25 ± 15	
1114	Local Oscillator Channel 15		25 ± 15	
1116	PLL LO #2 Channels 9-14		25 ± 15	
1118	PLL LO #1 Channels 9-14		25 ± 15	
1120	PLLO (Reference Oscillator)**/ Not used ***			
1122	Mixer I.F. Amp. Channel 3		25 ± 15	
1124	Mixer I.F. Amp. Channel 4		25 ± 15	
1126	Mixer I.F. Amp. Channel 5		25 ± 15	
1128	Mixer I.F. Amp. Channel 6		25 ± 15	
1130	Mixer I.F. Amp. Channel 7		25 ± 15	
1132	Mixer I.F. Amp. Channel 8		25 ± 15	
1134	Mixer I.F. Amp. Channels 9-14		25 ± 15	
1136	Mixer I.F. Amp. Channel 15		25 ± 15	↓

- * Value is from the STE printout sheets. Copying data to this sheet is optional.
 ** For S/N 101 through 104.
 *** For S/N 105 and up.

(Continued on Sheet 2)

TEST DATA SHEET 30 (Sheet 2 of 2)
Cold Cal Mode Temperature Sensors Section [VI] (Paragraph 3.2.4.3.4.3)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1138	I.F. Amp. Channel 11-14		25 ± 15	P
1140	I.F. Amp. Channel 9		25 ± 15	
1142	I.F. Amp. Channel 10		25 ± 15	
1144	I.F. Amp. Channel 11		25 ± 15	
1146	DC/DC Converter		25 ± 15	
1148	I.F. Amp. Channel 13		25 ± 15	
1150	I.F. Amp. Channel 14		25 ± 15	
1152	I.F. Amp. Channel 12		25 ± 15	
1154	RF Shelf A1-1		25 ± 15	
1156	RF Shelf A1-2		25 ± 15	
1158	Detector Preamp Assy.		25 ± 15	
1160	Scan Motor A1-1		25 ± 15	
1162	Scan Motor A1-2		25 ± 15	
1164	Feed Horn A1-1		25 ± 15	
1166	Feed Horn A1-2		25 ± 15	
1168	R.F. Mux A1-1		25 ± 15	
1170	R.F. Mux A1-2		25 ± 15	
1172	Local Oscillator Channel 3		25 ± 15	
1174	Local Oscillator Channel 4		25 ± 15	
1176	Local Oscillator Channel 5		25 ± 15	
1178	Local Oscillator Channel 6		25 ± 15	
1180	Temp Sensor Ref Voltage Count		**	✓

* Value is from the STE printout sheets. Copying data to this sheet is optional.

** = Count of 24,552 +1765,-1308.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109

R. Hight 11/12/99
Test Systems Engineer Date



NOV 19 99

Customer Representative
(Flight Hardware Only)

Date

Quality Control



Date

MSU	A1-33 A1.EXE	COLD CAL MODE	P1	19-NOV-99	19:45:07	SCAN NUMBER	441
5]	DIGITAL A DATA	ELEMENT 0000					
6]	DIGITAL B DATA	ELEMENT 00					
7]	ANALOG DATA	ELEMENT 00					

IO	DIGITAL A		TEMPERATURES		1 TO 16	DATA	TEMP C
	DATA	TEMP C	NO				
1	SCAN MOTOR A1-1	17795	23.18	9	LO CHANNEL 5	21453	29.29
2	SCAN MOTOR A1-2	18489	23.32	10	LO CHANNEL 6	20158	27.02
3	FEEDHORN A1-1	18982	24.87	11	LO CHANNEL 7	20644	27.73
4	FEEDHORN A1-2	19451	25.80	12	LO CHANNEL 8	20964	29.26
5	RF MUX A1-1	20214	26.77	13	LO CHANNEL 15	21794	29.38
6	RF MUX A1-2	20736	27.79	14	PLLO #2 CH 9/14	19823	26.06
7	LO CHANNEL 3	21883	29.91	15	PLLO #1 CH 9/14	22992	32.10
8	LO CHANNEL 4	21877	29.59	16	PLLO REFERENCE	32767	51.27

[21] UP [22] DOWN

```
POWER [ 4 ] ON
SCREEN ONLY [ 2 ] PRINT [ 3 ] FULL
SELECT TOUCHSCREEN BUTTON 2
[ 1 ] RETURN
```

ms. 72

MSU A1-33 A1.EXE COLD CAL MODE
[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

NO	DIGITAL A TEMPERATURES 17 TO 32				
	DATA	TEMP C	NO	DATA	TEMP C
17	MIXER IF CH 3	21403	25	IF AMP CH 11/14	21240
18	MIXER IF CH 4	21441	26	IF AMP CH 9	21262
19	MIXER IF CH 5	21111	27	IF AMP CH 10	21421
20	MIXER IF CH 6	20413	28	IF AMP CH 11	20082
21	MIXER IF CH 7	20454	29	DC/DC CONVERTER	22032
22	MIXER IF CH 8	21282	30	IF AMP CH 13	20106
23	MIXER IF CH 9/14	20347	31	IF AMP CH 14	20216
24	MIXER IF CH 15	21224	32	IF AMP CH 12	20003
[21] UP		[22] DOWN			

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

DIGITAL A TEMPERATURES 31 TO 46				
IO	DATA	TEMP C	NO	DATA
{1	IF AMP CH 14	20225	39 A1-1 WARM LOAD 4	23487
{2	IF AMP CH 12	20012	40 A1-1 WARM LOAD C	23575
{3	RF SHELF A1-1	20197	41 A1-2 WARM LOAD 1	23648
{4	RF SHELF A1-2	20650	42 A1-2 WARM LOAD 2	23800
{5	DETECTOR/PREAMP	19227	43 A1-2 WARM LOAD 3	23963
{6	A1-1 WARM LOAD 1	23573	44 A1-2 WARM LOAD 4	23736
{7	A1-1 WARM LOAD 2	23323	45 A1-2 WARM LOAD C	23629
{8	A1-1 WARM LOAD 3	23559	THERMAL REFERENCE	25323
[21] UP	[22] DOWN			

POWER [4] ON
 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
 SELECT TOUCHSCREEN BUTTON 2

TEST DATA SHEET 31
Digital-A Data Output Nadir Mode Synch Sequence,
Unit I.D./Serial Number and Digital-B Serial Data Verification
Sections [I], [II], and [III] (Paragraph 3.2.4.3.4.4)

Step	Element (For Ref)	Description	Recorded Value	Required Value	Pass/Fail
[I]	0001	Sync Sequence Byte 1	255	255	P
	0002	Sync Sequence Byte 2	255	255	
	0003	Sync Sequence Byte 3	255	255	
[II]	0004	Unit I.D. and Serial N	33	*	
[III]	0005	Digital-B Data Byte 1	16	16	
	0006	Digital-B Data Byte 2	14	14	
	0007	Digital-B Data Byte 3	0	0	
	0008	Digital-B Data Byte 4	0	0	

* AMSU A1 Identification Words (data entered in decimal system)	Binary	Decimal
AMSU-A1 S/N 101	00000001	1
AMSU-A1 S/N 102	00000101	5
AMSU-A1 S/N 103	00001001	9
AMSU-A1 S/N 104	00001101	13
AMSU-A1 S/N 105	00010001	17
AMSU-A1 S/N 106	00010101	21
AMSU-A1 S/N 107	00011001	25
AMSU-A1 S/N 108	00011101	29
AMSU-A1 S/N 109	00100001	33

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 248613 SN: 109

R. High 11/12/99
Test Systems Engineer

Date



NOV 19 99

Customer Representative
(Flight Hardware Only)

Date

7A 200 11/19/99
Quality Control

Date

MSU A1-33 A1.EXE NADIR MODE P1 19-NOV-99 19:55:53 SCAN NUMBER 521
5] DIGITAL A DATA ELEMENT 0000
6] DIGITAL B DATA ELEMENT 00
7] ANALOG DATA ELEMENT 00

COMMANDS
9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = YES [16]
11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = NO [17]
12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL0 # 1 [18]
13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]
POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 3

7DS 31

36: 74 613 OP: 0810 1ST CPT
%N: 133, 20-3-II SN: 109

TEST ENG: R. Bond Date: 11/19/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	1	572	NADIR SAMPLE	16334
2	SYNC SEQUENCE	2	574	CH	16374
3	SYNC SEQUENCE	3	576	CH	15910
4	UNIT ID AND SERIAL NO	1	578	CH	17190
5	DIGITAL B DATA	1	580	CH	16951
6	DIGITAL B DATA	2	582	CH	19707
7	DIGITAL B DATA	3	584	CH	17643
8	DIGITAL B DATA	4	586	CH	14778
10	REFLECTOR 1 POSITION	1	588	REFLECTOR 1 POSITION	6011
12	REFLECTOR 2 POSITION	1	590	REFLECTOR 2 POSITION	5825
14	REFL 1 POS	1	592	REFL 1 POS	6011
16	REFL 2 POS	1	594	REFL 2 POS	5826
18	NADIR SAMPLE	1	596	NADIR SAMPLE	16159
20		2	598	CH	16199
22		3	600	CH	17334
24		4	602	CH	16707
26		5	604	CH	16559
28		6	606	CH	16333
30		7	608	CH	16370
32		8	610	CH	15916
34		9	612	CH	17197
36		10	614	CH	16949
38		11	616	CH	19726
40		12	618	CH	17645
42		13	620	CH	14777
44		14	622	CH	6011
46	REFLECTOR 1 POSITION	2	624	REFLECTOR 1 POSITION	5826
48	REFLECTOR 2 POSITION	2	626	REFLECTOR 2 POSITION	5826
50	REFL 1 POS	2	628	REFL 1 POS	6010
52	REFL 2 POS	2	630	REFL 2 POS	5825
54	NADIR SAMPLE	2	632	NADIR SAMPLE	16158
56		3	634	CH	16201
58		4	636	CH	17338
60		5	638	CH	16710
62		6	640	CH	16562
64		7	642	CH	16333
66		8	644	CH	16366
68		9	646	CH	15912
70		10	648	CH	17186
72		11	650	CH	16940
74		12	652	CH	19715
76		13	654	CH	17652
78		14	656	CH	14776
80	REFLECTOR 1 POSITION	3	658	REFLECTOR 1 POSITION	6010
82	REFLECTOR 2 POSITION	3	660	REFLECTOR 2 POSITION	5826
84	REFL 1 POS	3	662	REFL 1 POS	6010
86	REFL 2 POS	3	664	REFL 2 POS	5826
88	NADIR SAMPLE	3	666	NADIR SAMPLE	16153
90		4	668	CH	16200
92		5	670	CH	17339
		6		CH	16712

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16558	672	CH 7	16560
96	CH 8	16331	674	CH 8	16334
98	CH 9	16372	676	CH 9	16370
100	CH 10	15918	678	CH 10	15914
102	CH 11	17194	680	CH 11	17195
104	CH 12	16953	682	CH 12	16950
106	CH 13	19721	684	CH 13	19726
108	CH 14	17639	686	CH 14	17657
110	CH 15	14778	688	CH 15	14778
112	REFLECTOR 1 POSITION	6011	690	REFLECTOR 1 POSITION 21	6011
114	REFLECTOR 2 POSITION	5826	692	REFLECTOR 2 POSITION 21	5825
116	REFL 1 POS 4	6011	694	REFL 1 POS 21	6011
118	REFL 2 POS 4	5826	696	REFL 2 POS 21	5826
120	NADIR SAMPLE	16157	698	NADIR SAMPLE	16156
122	CH 3	16203	700	CH 3	16197
124	CH 4	17343	702	CH 4	17336
126	CH 5	16711	704	CH 5	16708
128	CH 6	16561	706	CH 6	16558
130	CH 7	16331	708	CH 7	16335
132	CH 8	16375	710	CH 8	16369
134	CH 9	15916	712	CH 9	15912
136	CH 10	17192	714	CH 10	17192
138	CH 11	16941	716	CH 11	16938
140	CH 12	19718	718	CH 12	19714
142	CH 13	17647	720	CH 13	17670
144	CH 14	14778	722	CH 14	14777
146	CH 15	6011	724	CH 15	6011
148	REFLECTOR 1 POSITION	5826	726	REFLECTOR 1 POSITION 22	5825
150	REFLECTOR 2 POSITION	6011	728	REFLECTOR 2 POSITION 22	6011
152	REFL 1 POS 5	5826	730	REFL 1 POS 22	5826
154	REFL 2 POS 5	5826	732	REFL 2 POS 22	5826
156	NADIR SAMPLE	16159	734	NADIR SAMPLE	16154
158	CH 3	16197	736	CH 3	16199
160	CH 4	17339	738	CH 4	17338
162	CH 5	16713	740	CH 5	16714
164	CH 6	16559	742	CH 6	16558
166	CH 7	16332	744	CH 7	16332
168	CH 8	16371	746	CH 8	16371
170	CH 9	15910	748	CH 9	15913
172	CH 10	17191	750	CH 10	17194
174	CH 11	16948	752	CH 11	16955
176	CH 12	19712	754	CH 12	19714
178	CH 13	17668	756	CH 13	17646
180	CH 14	14779	758	CH 14	14777
182	CH 15	6011	760	CH 15	6011
184	REFLECTOR 1 POSITION	5826	762	REFLECTOR 1 POSITION 23	5826
186	REFLECTOR 2 POSITION	6011	764	REFLECTOR 2 POSITION 23	6011
188	REFL 1 POS 6	5826	766	REFL 1 POS 23	5825
190	REFL 2 POS 6	5826	768	REFL 2 POS 23	5825
192	NADIR SAMPLE	16159	770	NADIR SAMPLE	16156
	CH 3	16201		CH 3	16204
	CH 4	16201		CH 4	16204
	CH 5	17341		CH 5	17337

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16713	772	CH 6	16706
196	CH 7	16562	774	CH 7	16555
198	CH 8	16330	776	CH 8	16334
200	CH 9	16367	778	CH 9	16370
202	CH 10	15915	780	CH 10	15911
204	CH 11	17188	782	CH 11	17194
206	CH 12	16948	784	CH 12	16943
208	CH 13	19706	786	CH 13	19722
210	CH 14	17659	788	CH 14	17644
212	CH 15	14779	790	CH 15	14777
214	REFLECTOR 1 POSITION	6011	792	REFLECTOR 1 POSITION 24	6011
216	REFLECTOR 2 POSITION	5825	794	REFLECTOR 2 POSITION 24	5826
218	REFL 1 POS 7	6011	796	REFL 1 POS 24	6011
220	REFL 2 POS 7	5826	798	REFL 2 POS 24	5825
222	NADIR SAMPLE	16156	800	NADIR SAMPLE	16153
224	CH 3	16201	802	CH 3	16200
226	CH 4	17337	804	CH 4	17339
228	CH 5	16713	806	CH 5	16709
230	CH 6	16562	808	CH 6	16561
232	CH 7	16329	810	CH 7	16336
234	CH 8	16370	812	CH 8	16369
236	CH 9	15915	814	CH 9	15914
238	CH 10	17197	816	CH 10	17185
240	CH 11	16945	818	CH 11	16950
242	CH 12	19736	820	CH 12	19714
244	CH 13	17653	822	CH 13	17641
246	CH 14	14777	824	CH 14	14778
248	CH 15	6010	826	CH 15	6011
250	REFLECTOR 1 POSITION	5826	828	REFLECTOR 1 POSITION 25	5826
252	REFLECTOR 2 POSITION	6010	830	REFLECTOR 2 POSITION 25	6011
254	REFL 1 POS 8	5825	832	REFL 1 POS 25	5826
256	REFL 2 POS 8	16158	834	REFL 2 POS 25	16153
258	NADIR SAMPLE	16199	836	NADIR SAMPLE	16201
260	CH 3	17335	838	CH 3	17339
262	CH 4	16706	840	CH 4	16712
264	CH 5	16564	842	CH 5	16562
266	CH 6	16332	844	CH 6	16330
268	CH 7	16373	846	CH 7	16369
270	CH 8	15919	848	CH 8	15917
272	CH 9	17192	850	CH 9	17190
274	CH 10	16957	852	CH 10	16951
276	CH 11	19730	854	CH 11	19719
278	CH 12	17665	856	CH 12	17662
280	CH 13	14778	858	CH 13	14778
282	CH 14	6011	860	CH 14	6011
284	CH 15	5826	862	CH 15	5826
286	REFLECTOR 1 POSITION	6011	864	REFLECTOR 1 POSITION 26	6011
288	REFLECTOR 2 POSITION	5826	866	REFLECTOR 2 POSITION 26	5826
290	REFL 1 POS 9	16158	868	REFL 1 POS 26	16157
292	REFL 2 POS 9	16201	870	REFL 2 POS 26	16201
	NADIR SAMPLE			NADIR SAMPLE	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17337	872	REFLECTOR 1 POSITION 27	6011
296	CH 6	16712	874	REFLECTOR 2 POSITION 27	5825
298	CH 7	16559	876	REFL 1 POS 27 2ND LOOK	6010
300	CH 8	16329	878	REFL 2 POS 27 2ND LOOK	5826
302	CH 9	16370	880	NADIR SAMPLE 27	16158
304	CH 10	15914	882	CH 3	16200
306	CH 11	17194	884	CH 4	17333
308	CH 12	16945	886	CH 5	16561
310	CH 13	19700	888	CH 6	16332
312	CH 14	17659	890	CH 7	16368
314	CH 15	14778	892	CH 8	15912
316	REFLECTOR 1 POSITION 10	6011	894	CH 9	17189
318	REFLECTOR 2 POSITION 10	5826	896	CH 10	16951
320	REFL 1 POS 10 2ND LOOK	6011	898	CH 11	19710
322	REFL 2 POS 10 2ND LOOK	5826	900	CH 12	17655
324	NADIR SAMPLE 10	16156	902	CH 13	14778
326	CH 3	16200	904	CH 14	6010
328	CH 4	17337	906	CH 15	5826
330	CH 5	16713	908	REFLECTOR 1 POSITION 28	16160
332	CH 6	16561	910	REFLECTOR 2 POSITION 28	16199
334	CH 7	16331	912	REFL 1 POS 28 2ND LOOK	16712
336	CH 8	16370	914	REFL 2 POS 28 2ND LOOK	16559
338	CH 9	15914	916	NADIR SAMPLE 28	16370
340	CH 10	17189	918	CH 3	15911
342	CH 11	16949	920	CH 4	17190
344	CH 12	19726	922	CH 5	16949
346	CH 13	17664	924	CH 6	19724
348	CH 14	14778	926	CH 7	17638
350	CH 15	6011	928	CH 8	14778
352	REFLECTOR 1 POSITION 11	5825	930	CH 9	6010
354	REFLECTOR 2 POSITION 11	6011	932	CH 10	5826
356	REFL 1 POS 11 2ND LOOK	5826	934	CH 11	5825
358	REFL 2 POS 11 2ND LOOK	16152	936	CH 12	16160
360	NADIR SAMPLE 11	16197	938	CH 13	16199
362	CH 3	17343	940	CH 14	17339
364	CH 4	16713	942	CH 15	16712
366	CH 5	16560	944	REFLECTOR 1 POSITION 29	16559
368	CH 6	16330	946	REFLECTOR 2 POSITION 29	16370
370	CH 7	16368	948	REFL 1 POS 29 2ND LOOK	16336
372	CH 8	15916	950	REFL 2 POS 29 2ND LOOK	15911
374	CH 9	17186	952	NADIR SAMPLE 29	15911
376	CH 10	16945	954	CH 3	17190
378	CH 11	19728	956	CH 4	16949
380	CH 12	17670	958	CH 5	19724
382	CH 13	14777	960	CH 6	17638
384	CH 14	6011	962	CH 7	14778
386	CH 15	5826	964	REFLECTOR 1 POSITION 29	6011
388	REFLECTOR 2 POSITION 12	5826	966	REFLECTOR 2 POSITION 29	5826
390	REFL 1 POS 12 2ND LOOK	6011	968	REFL 1 POS 29 2ND LOOK	6011
392	REFL 2 POS 12 2ND LOOK	5825	970	REFL 2 POS 29 2ND LOOK	5825
394	NADIR SAMPLE 12	16153		NADIR SAMPLE 29	16157

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16200	972	REFLECTOR 1 POSITION 30	6011
396	CH 5	17338	974	REFLECTOR 2 POSITION 30	5826
398	CH 6	16712	976	REFL 1 POS 30 2ND LOOK	6011
400	CH 7	16559	978	REFL 2 POS 30 2ND LOOK	5826
402	CH 8	16333	980	NADIR SAMPLE	16154
404	CH 9	16370	982		16201
406	CH 10	15916	984		17335
408	CH 11	17189	986		16562
410	CH 12	16953	988		16331
412	CH 13	19722	990		16368
414	CH 14	17650	992		15917
416	CH 15	14779	994		17186
418	REFLECTOR 1 POSITION 13	6011	996		16949
420	REFLECTOR 2 POSITION 13	5826	998		19727
422	REFL 1 POS 13 2ND LOOK	6011	1000		17645
424	REFL 2 POS 13 2ND LOOK	5826	1002		14778
426	NADIR SAMPLE	16154	1004		6010
428		16201	1006		5825
430		17335	1008		6010
432		16711	1010		5826
434		16562	1012		16152
436		16331	1014		16201
438		16368	1016		17340
440		15917	1018		16711
442		17186	1020		16558
444		16949	1022		16331
446		19727	1024		15916
448		17645	1026		17190
450		14778	1028		16950
452	REFLECTOR 1 POSITION 14	6010	1030	REFLECTOR 1 COLD CAL POS	19719
454	REFLECTOR 2 POSITION 14	5825	1032	REFLECTOR 2 COLD CAL POS	17660
456	REFL 1 POS 14 2ND LOOK	6010	1034	REFL 1 COLD CAL 2ND LOOK	14777
458	REFL 2 POS 14 2ND LOOK	5826	1036	REFL 2 COLD CAL 2ND LOOK	0E
460	NADIR SAMPLE	16152	1038	COLD CAL DATA 1	0E
462		16201	1040		0
464		17340	1042		0
466		16711	1044		0
468		16558	1046		0
470		16331	1048		0
472		16368	1050		0
474		15918	1052		0
476		17186	1054		0
478		16951	1056		0
480		19715	1058		0
482		17649	1060		0
484		14777	1062		0
486	REFLECTOR 1 POSITION 15	6010	1064	COLD CAL DATA 2	0
488	REFLECTOR 2 POSITION 15	5826	1066		0
490	REFL 1 POS 15 2ND LOOK	6011	1068		0
492	REFL 2 POS 15 2ND LOOK	5825	1070		0

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
1090	SCAN MOTOR A1-1	17778	23.15	
1092	SCAN MOTOR A1-2	18513	23.37	
1094	FEEDHORN A1-1	19174	25.24	
1096	FEEDHORN A1-2	19759	26.38	
1098	RF MUX A1-1	20543	27.39	
1100	RF MUX A1-2	21196	28.66	
1102	LOCAL OSCILLATOR CHANNEL 3	22307	30.72	
1104	LOCAL OSCILLATOR CHANNEL 4	22321	30.44	
1106	LOCAL OSCILLATOR CHANNEL 5	21893	30.13	
1108	LOCAL OSCILLATOR CHANNEL 6	20368	27.42	
1110	LOCAL OSCILLATOR CHANNEL 7	20978	28.37	
1112	LOCAL OSCILLATOR CHANNEL 8	21375	30.05	
1114	LOCAL OSCILLATOR CHANNEL 15	22202	30.16	
1116	PLL LO #2 CHANNELS 9 THROUGH 14	20180	26.74	
1118	PLL LO #1 CHANNELS 9 THROUGH 14	23450	32.98	
1120	SPARE (NOT USED)	32767	51.27	
1122	MIXER/IF AMPLIFIER CHANNEL 3	21862	29.06	
1124	MIXER/IF AMPLIFIER CHANNEL 4	21900	29.33	
1126	MIXER/IF AMPLIFIER CHANNEL 5	21561	29.06	
1128	MIXER/IF AMPLIFIER CHANNEL 6	20733	27.84	
1130	MIXER/IF AMPLIFIER CHANNEL 7	20812	28.23	
1132	MIXER/IF AMPLIFIER CHANNEL 8	21737	29.34	
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20671	27.22	
1136	MIXER/IF AMPLIFIER CHANNEL 15	21602	29.96	
1138	IF AMPLIFIER CHANNEL 11 THRU 14	21647	29.64	
1140	IF AMPLIFIER CHANNEL 9	21672	29.75	
1142	IF AMPLIFIER CHANNEL 10	21834	29.75	
1144	IF AMPLIFIER CHANNEL 11	20393	27.29	
1146	DC/DC CONVERTER	22424	31.04	
1148	IF AMPLIFIER CHANNEL 13	20411	27.31	
1150	IF AMPLIFIER CHANNEL 14	20518	27.61	
1152	IF AMPLIFIER CHANNEL 12	20312	27.23	
1154	RF SHELVE A1-1	20556	28.55	
1156	RF SHELVE A1-2	21069	28.69	
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	19442	25.79	
1160	A1-1 WARM LOAD 1	23577	23.48	
1162	A1-1 WARM LOAD 2	23327	23.41	
1164	A1-1 WARM LOAD 3	23561	23.50	
1166	A1-1 WARM LOAD 4	23491	23.44	
1168	A1-1 WARM LOAD CENTER	23580	23.59	
1170	A1-2 WARM LOAD 1	23680	24.09	
1172	A1-2 WARM LOAD 2	23836	24.04	
1174	A1-2 WARM LOAD 3	23996	24.16	
1176	A1-2 WARM LOAD 4	23774	24.18	
1178	A1-2 WARM LOAD CENTER	23665	24.08	
1180	TEMP SENSOR REFERENCE VOLTAGE	25323		

DESCRIPTION	STATUS	STATUS	STATUS
SCANNER A1-1 POWER	ON	ON	ON
SCANNER A1-2 POWER	ON	ON	ON
PLL POWER	PLLO # 1	PLLO # 1	PLLO # 1
ANTENNA IN WARM CAL POSITION MODE	NO	NO	NO
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO
ANTENNA IN NADIR POSITION MODE	YES	YES	YES
ANTENNA IN FULL SCAN MODE	NO	NO	NO
SURVIVAL HEATER POWER	OFF	OFF	OFF
MODULE POWER	CONNECT	CONNECT	CONNECT
COLD CAL POSITION MSB	ZERO	ZERO	ZERO
COLD CAL POSITION LSB	ZERO	ZERO	ZERO

DESCRIPTION	VALUE	DEG C	VALUE	DEG C	VALUE	DEG C
A1-1 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0	214	18.0
A1-2 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4	215	19.4
A1-1 RF SHELF TEMPERATURE	216	20.7	216	20.7	216	20.7
A1-2 RF SHELF TEMPERATURE	218	23.4	218	23.4	218	23.4
A1-1 WARM LOAD TEMPERATURE	214	18.0	214	18.0	214	18.0
A1-2 WARM LOAD TEMPERATURE	215	19.4	215	19.4	215	19.4

DESCRIPTION	VALUE	AMPS/ VOLTS	VALUE	AMPS/ VOLTS	VALUE	AMPS/ VOLTS
A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	3	1.40	3	1.40	3	1.40
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	2	0.93	2	0.93	2	0.93
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	169	14.58	169	14.58	169	14.58
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	146	-15.25	146	-15.25	146	-15.25
RECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	145	4.83	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	144	4.80	144	4.80	144	4.80
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76	169	9.76
PHASE LOCK LOOP (CHANNEL 9/14)	169	14.58	169	14.58	169	14.58
PHASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30	145	-15.30
L.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 3)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78	171	9.78
PLLO # 2 LOCK DETECT	1	0.02	1	0.02	1	0.02
PLLO # 1 LOCK DETECT	220	4.40	220	4.40	220	4.40
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	57.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

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TEST DATA SHEET 32
Digital-A Data Output Nadir Mode Radiometer Data Section [V] (Paragraph 3.2.4.3.4.4)

BP	A1-2 Channel-3 (50.3 GHz)				A1-1 Channel-9 (57.290344 GHz)			
	Element (For Ref)	Position*	Required**	Pass/Fail	Element (For Ref)	Position*	Required**	Pass/Fail
01	0018			P	0030			P
02	0052				0064			
03	0086				0098			
04	0120				0132			
05	0154				0166			
06	0188				0200			
07	0222				0234			
08	0256				0268			
09	0290				0302			
10	0324				0336			
11	0356				0370			
12	0392				0404			
13	0426				0438			
14	0460				0472			
15	0494				0506			
16	0528				0540			
17	0562				0574			
18	0596				0608			
19	0630				0642			
20	0664				0676			
21	0698				0710			
22	0732				0744			
23	0766				0778			
24	0800				0812			
25	0834				0846			
26	0868				0880			
27	0902				0914			
28	0936				0948			
29	0970				0982			
30	1004				1016			
CC	1038		0		1050		0	
WC	1190		0		1202		0	

* Actual counts from computer printout. Rewriting counts on this data sheet is optional.

** Required = 16,500 ± 4000 counts (Unless otherwise indicated).

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

S/N: 109

Test Systems Engineer R. Haight

Date

7A
200

11/19/99



NOV 19 99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

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P1 19-NOV-99 19:56:31 SCAN NUMBER 526

MSU A1-J3 A1.EXE NADIR MODE
5] DIGITAL A DATA ELEMENT 0000
6] DIGITAL B DATA ELEMENT 00
7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BP	DATA	BP	CHANNEL 3		BP	DATA	BP	DATA
			DATA	BP				
1	16137	9	16135	17	16136	25	16131	
2	16138	10	16137	18	16134	26	16134	
3	16135	11	16131	19	16132	27	16131	
4	16135	12	16134	20	16131	28	16130	
5	16134	13	16132	21	16128	29	16133	
6	16137	14	16131	22	16135	30	16138	
7	16132	15	16137	23	16134	CC	0	
8	16132	16	16138	24	16134	WC	0	
	[22]	DOWN						

21] UP

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

7DS 32

MSU, A1-33 A1.EXE NADIR MODE P1 19-NOV-99 19:57:26 SCAN NUMBER 533

5] DIGITAL A DATA ELEMENT 0000

6] DIGITAL B DATA ELEMENT 00

7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BP		DATA		BP		DATA		BP		DATA	
		CHANNEL									
		9									
1	16393	9	16393	17	16396	25	16392				
2	16393	10	16393	18	16394	26	16396				
3	16394	11	16391	19	16392	27	16388				
4	16394	12	16396	20	16391	28	16393				
5	16394	13	16394	21	16395	29	16395				
6	16393	14	16396	22	16396	30	16395				
7	16397	15	16397	23	16394	CC	0				
8	16392	16	16392	24	16394	WC	0				
		[22]		DOWN							

21] UP

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL
SELECT TOUCHSCREEN BUTTON 2 [1] RETURN

TEST DATA SHEET 33 (Sheet 1 of 2)
Nadir Mode Temperature Sensors Section [VI] (Paragraph 3.2.4.3.4.4)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1090	A1-1 Warm Load 1		25 ± 15	✓
1092	A1-1 Warm Load 2		25 ± 15	
1094	A1-1 Warm Load 3		25 ± 15	
1096	A1-1 Warm Load 4		25 ± 15	
1098	A1-1 Warm Load Center		25 ± 15	
1100	A1-2 Warm Load 1		25 ± 15	
1102	A1-2 Warm Load 2		25 ± 15	
1104	A1-2 Warm Load 3		25 ± 15	
1106	A1-2 Warm Load 4		25 ± 15	
1108	A1-2 Warm Load Center		25 ± 15	
1110	Local Oscillator Channel 7		25 ± 15	
1112	Local Oscillator Channel 8		25 ± 15	
1114	Local Oscillator Channel 15		25 ± 15	
1116	PLL LO #2 Channels 9-14		25 ± 15	
1118	PLL LO #1 Channels 9-14		25 ± 15	
1120	PLLO (Reference Oscillator)**/ Not used ***		25 ± 15	
1122	Mixer I.F. Amp. Channel 3		25 ± 15	
1124	Mixer I.F. Amp. Channel 4		25 ± 15	
1126	Mixer I.F. Amp. Channel 5		25 ± 15	
1128	Mixer I.F. Amp. Channel 6		25 ± 15	
1130	Mixer I.F. Amp. Channel 7		25 ± 15	
1132	Mixer I.F. Amp. Channel 8		25 ± 15	
1134	Mixer I.F. Amp. Channels 9-14		25 ± 15	
1136	Mixer I.F. Amp. Channel 15		25 ± 15	✓

* Value is from the STE printout sheets. Copying data to this sheet is optional.

** For S/N 101 through 104.

*** For S/N 105 and up.

(Continued on Sheet 2)

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TEST DATA SHEET 33 (Sheet 2 of 2)
Nadir Mode Temperature Sensors Section [VI] (Paragraph 3.2.4.3.4.4)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1138	I.F. Amp. Channel 11-14		25 ± 15	P
1140	I.F. Amp. Channel 9		25 ± 15	
1142	I.F. Amp. Channel 10		25 ± 15	
1144	I.F. Amp. Channel 11		25 ± 15	
1146	DC/DC Converter		25 ± 15	
1148	I.F. Amp. Channel 13		25 ± 15	
1150	I.F. Amp. Channel 14		25 ± 15	
1152	I.F. Amp. Channel 12		25 ± 15	
1154	RF Shelf A1-1		25 ± 15	
1156	RF Shelf A1-2		25 ± 15	
1158	Detector Preamp Assy.		25 ± 15	
1160	Scan Motor A1-1		25 ± 15	
1162	Scan Motor A1-2		25 ± 15	
1164	Feed Horn A1-1		25 ± 15	
1166	Feed Horn A1-2		25 ± 15	
1168	R.F. Mux A1-1		25 ± 15	
1170	R.F. Mux A1-2		25 ± 15	
1172	Local Oscillator Channel 3		25 ± 15	
1174	Local Oscillator Channel 4		25 ± 15	
1176	Local Oscillator Channel 5		25 ± 15	
1178	Local Oscillator Channel 6		25 ± 15	
1180	Temp Sensor Ref Voltage Count		**	↓

* Value is from the STE printout sheets. Copying data to this sheet is optional.
** = Count of 24,552 +1765,-1308.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748617

SN: 109

Test Systems Engineer

Date



NOV 19 99



11/19/99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

MSU A1-33 A1.EXE NADIR MODE P1 19-NOV-99 19:58:05 SCAN NUMBER 538
 5] DIGITAL A DATA ELEMENT 0000
 6] DIGITAL B DATA ELEMENT 00
 7] ANALOG DATA ELEMENT 00

IO	DIGITAL A TEMPERATURES 17 TO 32			
	DATA	TEMP C	NO	TEMP C
7 MIXER IF CH 3	21959	29.24	25 IF AMP CH 11/14	21728
8 MIXER IF CH 4	21997	29.52	26 IF AMP CH 9	21755
9 MIXER IF CH 5	21654	29.24	27 IF AMP CH 10	21916
10 MIXER IF CH 6	20801	27.96	28 IF AMP CH 11	20458
11 MIXER IF CH 7	20887	28.37	29 DC/DC CONVERTER	22504
12 MIXER IF CH 8	21832	29.53	30 IF AMP CH 13	20478
13 MIXER IF CH 9/14	20737	27.35	31 IF AMP CH 14	20586
14 MIXER IF CH 15	21680	30.11	32 IF AMP CH 12	20378

[22] DOWN

POWER [4] ON
 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
 SELECT TOUCHSCREEN BUTTON 2

5] DIGITAL A DATA ELEMENT 0000

6] DIGITAL B DATA ELEMENT 00

7] ANALOG DATA ELEMENT 00

DIGITAL A TEMPERATURES 31 TO 46			
	DATA	TEMP C	NO
1 IF AMP CH 14	20590	27.74	39 A1-1 WARM LOAD 4
2 IF AMP CH 12	20382	27.36	40 A1-1 WARM LOAD C
3 RF SHELF A1-1	20635	28.70	41 A1-2 WARM LOAD 1
4 RF SHELF A1-2	21162	28.87	42 A1-2 WARM LOAD 2
5 DETECTOR/PREAMP	19490	25.88	43 A1-2 WARM LOAD 3
6 A1-1 WARM LOAD 1	23578	23.48	44 A1-2 WARM LOAD 4
7 A1-1 WARM LOAD 2	23330	23.42	45 A1-2 WARM LOAD C
8 A1-1 WARM LOAD 3	23566	23.51	THERMAL REFERENCE
21] UP	[22] DOWN		

DATA	TEMP C
23495	23.45
23583	23.59
23699	24.13
23847	24.06
24010	24.19
23784	24.20
23675	24.10
25324	

POWER [4] ON SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
 SELECT TOUCHSCREEN BUTTON 2

TEST DATA SHEET 34
Analog Telemetry Verification by Way of Connector J6 (Paragraph 3.2.4.3.5.1)

	From	Description	To	Measured (volts)	Required (volts)	Pass/Fail
03	J6-02	RF Shelf A1-1 Temp.	J1-10	<u>4.39V</u>	3.5 ± 2 V	<u>P</u>
01	J6-03	A1-1 Scan Motor Temp.	J1-10	<u>4.35V</u>	3.5 ± 2 V	
05	J6-04	Warm Load A1-1 Temp.	J1-10	<u>4.35V</u>	3.5 ± 2 V	
04	J6-21	RF Shelf A1-2 Temp.	J1-10	<u>4.43V</u>	3.5 ± 2 V	
02	J6-22	A1-2 Scan Motor Temp.	J1-10	<u>4.36V</u>	3.5 ± 2 V	
06	J6-23	Warm Load A1-2 Temp.	J1-10	<u>4.37V</u>	3.5 ± 2 V	<u>P</u>
25	J6-06	PLLO No. 2 Lock detect	J2-03	<u>- .450V</u>	***	<u>P</u>
07	J6-08	A1-1 Drive Motor Curr.	J2-03	<u>1.76V</u>	3.5 ± 2 V	
10	J6-09	+15 V Antenna Drive	J2-03	<u>3.48V</u>	3.5 ± 2 V	
15	J6-10	+5 V Antenna Drive	J2-03	<u>2.97V</u>	3.5 ± 2 V	
09	J6-11	+15 V Signal Processing	J2-03	<u>3.47V</u>	3.5 ± 2 V	
14	J6-12	+5 V Signal Processing	J2-03	<u>2.96V</u>	3.5 ± 2 V	
22	J6-13	L.O. Voltage Channel 3	J2-03	<u>3.50V</u>	3.5 ± 2 V	
24	J6-14	L.O. Voltage Channel 5	J2-03	<u>3.50V</u>	3.5 ± 2 V	
20	J6-15	L.O. Voltage Channel 7	J2-03	<u>3.49V</u>	3.5 ± 2 V	
16	J6-16	+15 V PLL LO Ch 9-14	J2-03	<u>3.45V</u>	3.5 ± 2 V	
17	J6-17	*	J2-03	<u>3.44V</u>	3.5 ± 2 V	
27	J6-18	L.O. Voltage Channel 15	J2-03	<u>3.46V</u>	3.5 ± 2 V	
26	J6-25	PLLO No. 1 Lock detect	J2-03	<u>4.45V</u>	***	
08	J6-27	A1-2 Drive Motor Curr.	J2-03	<u>1.80V</u>	3.5 ± 2 V	
12	J6-28	-15 V Antenna Drive	J2-03	<u>3.01V</u>	3.5 ± 2 V	
11	J6-29	-15 V Signal Processing	J2-03	<u>3.02V</u>	3.5 ± 2 V	
23	J6-30	L.O. Voltage Channel 4	J2-03	<u>3.49V</u>	3.5 ± 2 V	
21	J6-31	L.O. Voltage Channel 6	J2-03	<u>3.48V</u>	3.5 ± 2 V	
19	J6-32	L.O. Voltage Channel 8	J2-03	<u>3.49V</u>	3.5 ± 2 V	
18	J6-33	-15 V PLL LO Ch 9-14	J2-03	<u>2.95V</u>	3.5 ± 2 V	
13	J6-34	**	J2-03	<u>3.19V</u>	3.5 ± 2 V	<u>P</u>

* +8.5 V PLL LO Ch 9-14 for S/N 101-104, +10V Mixer Amp for S/N 105 and above.

** +8 V Receiver for S/N 101-104, +8 V IF Amp for S/N 105 and above.

*** 4.5 ± 0.5 when locked, 0.5 ± 0.5 when unlocked or OFF. One must be locked.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

S/N: 109

Test Systems Engineer

Date



19 99



Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

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TEST DATA SHEET 35 (Sheet 1 of 2)
Analog Telemetry Signals by Way of the STE (Paragraph 3.2.4.3.5.2)

	Description	(*)	Measured (Deg. C)	Required (Deg. C)	Pass/Fail
01	A1-1 Scanner Motor	Temp	<u>19.50</u>	25 ± 15	<u>P</u>
02	A1-2 Scanner Motor	Temp	<u>19.80</u>	25 ± 15	<u>P</u>
03	A1-1 RF Shelf	Temp	<u>22.23</u>	25 ± 15	<u>P</u>
04	A1-2 RF Shelf	Temp	<u>24.84</u>	25 ± 15	<u>P</u>
05	A1-1 Warm Load	Temp	<u>18.79</u>	25 ± 15	<u>P</u>
06	A1-2 Warm Load	Temp	<u>20.51</u>	25 ± 15	<u>P</u>
			(mAmps)	(mAmps)	
07	Ant A1-1 Drv Motor Current		<u>41.66</u>	125 mA (Max)	<u>P</u>
08	Ant A1-2 Drv Motor Current		<u>39.99</u>	125 mA (Max)	<u>P</u>

(*) Data from the printout sheet. Rewriting data on this space is optional.

(Continued on sheet 2)

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109

R. Hail 11/19/99
Test Systems Engineer

7A
200 11/19/99
Quality Control Date

NOV 19 99
Customer Representative (Flight Hardware Only) Date

TEST DATA SHEET 35 (Sheet 2 of 2)
Analog Telemetry Signals by Way of the STE (Paragraph 3.2.4.3.5.2)

	Description	(*)	Measured (volts)	Required (volts)	Pass/ Fail
09	Signal Processing	+15 V	<u>14.72</u>	15.0 ± 0.5 V	<u>P</u>
10	Antenna Drive	+15 V	<u>14.83</u>	15.0 ± 0.5 V	<u>✓</u>
11	Signal Processing	-15 V	<u>-15.12</u>	-15.0 ± 0.5 V	<u>✓</u>
12	Antenna Drive	-15 V	<u>-15.09</u>	-15.0 ± 0.5 V	<u>✓</u>
13	Receiver	+8 V	<u>7.87</u>	8.0 ± 0.5 V	<u>✓</u>
14	Sig Processing	+5 V	<u>4.85</u>	5.0 ± 0.5 V	<u>✓</u>
15	Antenna Drive	+5 V	<u>4.90</u>	5.0 ± 0.5 V	<u>✓</u>
16	Phase Lock Loop Ch 9-14 (a)/	+8.5 V	<u>9.79</u>	8.5 ± 0.5 V	<u>✓</u>
	Receiver/Mixer IF (b)	+10 V	<u>9.79</u>	10.0 ± 0.5 V	<u>✓</u>
17	Phase Lock Loop Ch 9-14	+15 V	<u>14.66</u>	15.0 ± 0.5 V	<u>✓</u>
18	Phase Lock Loop Ch 9-14	-15 V	<u>-15.29</u>	-15.0 ± 0.5 V	<u>✓</u>
19	L.O. #8	Ch-8	<u>9.83</u>	(**) ± 0.5 V	<u>✓</u>
20	L.O. #7	Ch-7	<u>9.82</u>	(**) ± 0.5 V	<u>✓</u>
21	L.O. #6	Ch-6	<u>9.84</u>	(**) ± 0.5 V	<u>✓</u>
22	L.O. #3	Ch-3	<u>9.84</u>	(**) ± 0.5 V	<u>✓</u>
23	L.O. #4	Ch-4	<u>9.89</u>	(**) ± 0.5 V	<u>✓</u>
24	L.O. #5	Ch-5	<u>9.82</u>	(**) ± 0.5 V	<u>✓</u>
25	PLLO No. 2 Lock Detect		<u>.04</u>	(***)	<u>✓</u>
26	PLLO No. 1 Lock Detect		<u>4.40</u>	(***)	<u>✓</u>
27	L.O. #15	Ch-15	<u>14.71</u>	(**) ± 0.5 V	<u>✓</u>

(*) Data from the printout sheet. Rewriting data on this space is optional.

(**) GDO voltages from the manufacturer data sheet for S/N 101-104; DRO CH3-8 10V, GDO CH15 15V for S/N 105 and above.

(***) Locked PLO voltage 0 to +15 V, other PLO voltage ±15.0 V; one must be locked for S/N 101-104. Locked PLO voltage 4.0 ± 1.0 V, other PLO voltage 0.0 ± 0.2 V, one must be locked for S/N 105 and above.

(a) For S/N 101 through 104. (b) For S/N 105 and up.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

S/N: 109

Test Systems Engineer

Date



NOV 19 99



11/19/99

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

MSU	AL	EXE	FULL SCAN MODE	P1	19-NOV-5	06:00	SCAN NUMBER	596
5]	DIGITAL A DATA	ELEMENT 0000					
6]	DIGITAL B DATA	ELEMENT 00					
7]	ANALOG DATA	ELEMENT 00					

ANALOG DATA 1 TO 18

1	A1-1	SCANR MOTOR	215	19.50	DEG C	10	ANTENNA DRIVE	15VDC	14.83
2	A1-2	SCANR MOTOR	215	19.80	DEG C	11	SIGNAL PROCESSING	-15VDC	-15.12
3	A1-1	RF SHELF	217	22.23	DEG C	12	ANTENNA DRIVE	-15VDC	-15.09
4	A1-2	RF SHELF	219	24.84	DEG C	13	RECEIVER AMPLIFIER	8VDC	7.87
5	A1-1	WARM LOAD	214	18.79	DEG C	14	SIGNAL PROCESSOR	5 VDC	4.85
6	A1-2	WARM LOAD	215	20.51	DEG C	15	ANTENNA DRIVE	5 VDC	4.90
7	ANT A1-1	DRIVE MOTOR	CURRENT		41.66	16	RECEIVER MIXER/IF	10VDC	9.79
8	ANT A1-2	DRIVE MOTOR	CURRENT		39.99	17	PHASE LOCK LOOP	15VDC	14.66
9	SIGNAL PROCESSING		+15VDC		14.72	18	PHASE LOCK LOOP	-15VDC	-15.29
21	UP		[22]	DOWN					

```
POWER [ 4 ] ON SCREEN ONLY [ 2 ] PRINT [ 3 ] FULL
SELECT TOUCHSCREEN BUTTON 2 [ 1 ] RETURN
```

LSMS

5/0: 748613 OA: 0810 1ST CPT
2/N: 1331720-3-ET SN: 109

TEST ENG: R. King DATE: 11/18/99
QUALITY: FA
200

[5] DIGITAL A DATA

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

ANALOG DATA 10 TO 27

0 ANTENNA DRIVE	15VDC	14.86	19	L.O.	VOLTAGE	CH 8	9.83
1 SIGNAL PROCESSING	-15VDC	-15.13	20	L.O.	VOLTAGE	CH 7	9.82
2 ANTENNA DRIVE	-15VDC	-15.06	21	L.O.	VOLTAGE	CH 6	9.84
3 RECEIVER AMPLIFIER	8VDC	7.87	22	L.O.	VOLTAGE	CH 3	9.84
4 SIGNAL PROCESSOR	5 VDC	4.86	23	L.O.	VOLTAGE	4	9.89
5 ANTENNA DRIVE	5 VDC	4.91	24	L.O.	VOLTAGE	5 CH 4	9.82
6 RECEIVER MIXER/IF	10VDC	9.79	25	PLLO # 2	LOCK DETECT	6 CH 5	0.04
7 PHASE LOCK LOOP CH9/14	15VDC	14.66	26	PLLO # 1	LOCK DETECT		4.40
8 PHASE LOCK LOOP CH9/14	-15VDC	-15.29	27	L.O.	VOLTAGE	CH15	14.71
21] UP	[22] DOWN						

POWER [4] ON

SCREEN ONLY [2] PRINT [3] FULL

[1] RETURN

SELECT TOUCHSCREEN BUTTON 2

TEST DATA SHEET 36
Integrate/Hold and Dump Signal Verification (Paragraph 3.2.4.3.6.1)

ATTACH PHOTOGRAPH OR PLOT HERE

Parameter	Measured	Required	Pass/ Fail
Scope Channel-1: Integration/Hold			
Time Measured (A)*	164.8 ms	165 ms \pm 10%	P
Time Measured (B)*	37.6 ms	35 ms \pm 10%	P
Amplitude Measured	5.0 V	5.0 \pm 0.2 V	P
Scope Channel-2: Dump Signal			
Time Measured (D)*	12.8 ms	9 ms to 15 ms	P
Amplitude Measured	4.95 V	5.0 \pm 0.2 V	P

* Refer to Figure 2 for waveform configuration.

Circle Test: (CPT) LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

S/N: 109

R. Haib
Test Systems Engineer

Date

11/19/99

Customer Representative
(Flight Hardware Only)

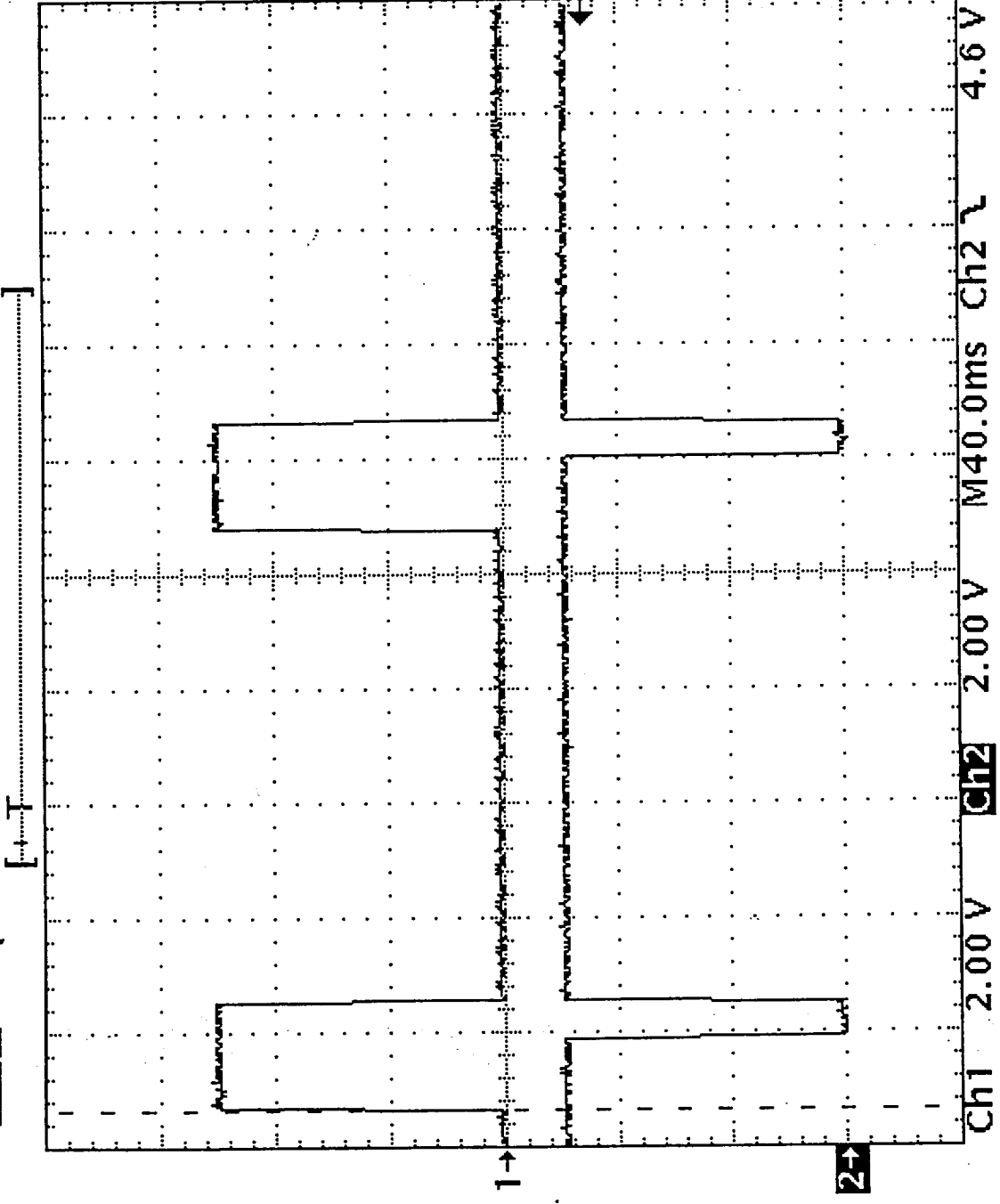
Date

Quality Control

Date

Tek Stop: 2.50kS/s 46 Acqs

7DS36



Δ : 0 s
@: -26.4ms

Ch1 +Width 37.60ms

Ch2 -Width 12.80ms

Ch2 +Width 190.00ms

19 Nov 1999
21:32:39

96: 748613 OP: 0810 1st CPT
7N: 1331720-3-II SN: 109

TEST ENG: R. H. H. DATE: 11/19/99

—

—

—

TEST DATA SHEET 37
Integration Time (Analog Output) Verification (Paragraph 3.2.4.3.6.2)

ATTACH PHOTOGRAPH OR PLOT HERE

Channel 03
Frequency: 50.3 GHz

INTEGRATION (X) *
Measured 165.6 ms
Required 165 ms \pm 10%
Pass/Fail P

HOLD (B-D) *
Measured 24.8 ms
Required 25 ms \pm 10%
Pass/Fail P

DUMP (D) *
Measured 11.2 ms
Required 9 ms to 15 ms
Pass/Fail P

ATTACH PHOTOGRAPH OR PLOT HERE

Channel 04
Frequency: 52.8 GHz

INTEGRATION (X) *
Measured 165.6 ms
Required 165 ms \pm 10%
Pass/Fail P

HOLD (B-D) *
Measured 24.8 ms
Required 25 ms \pm 10%
Pass/Fail P

DUMP (D) *
Measured 12.8 ms
Required 9 ms to 15 ms
Pass/Fail P

* Refer to Figure 2 for waveform configuration.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109

R. Hail 11/19/99
Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

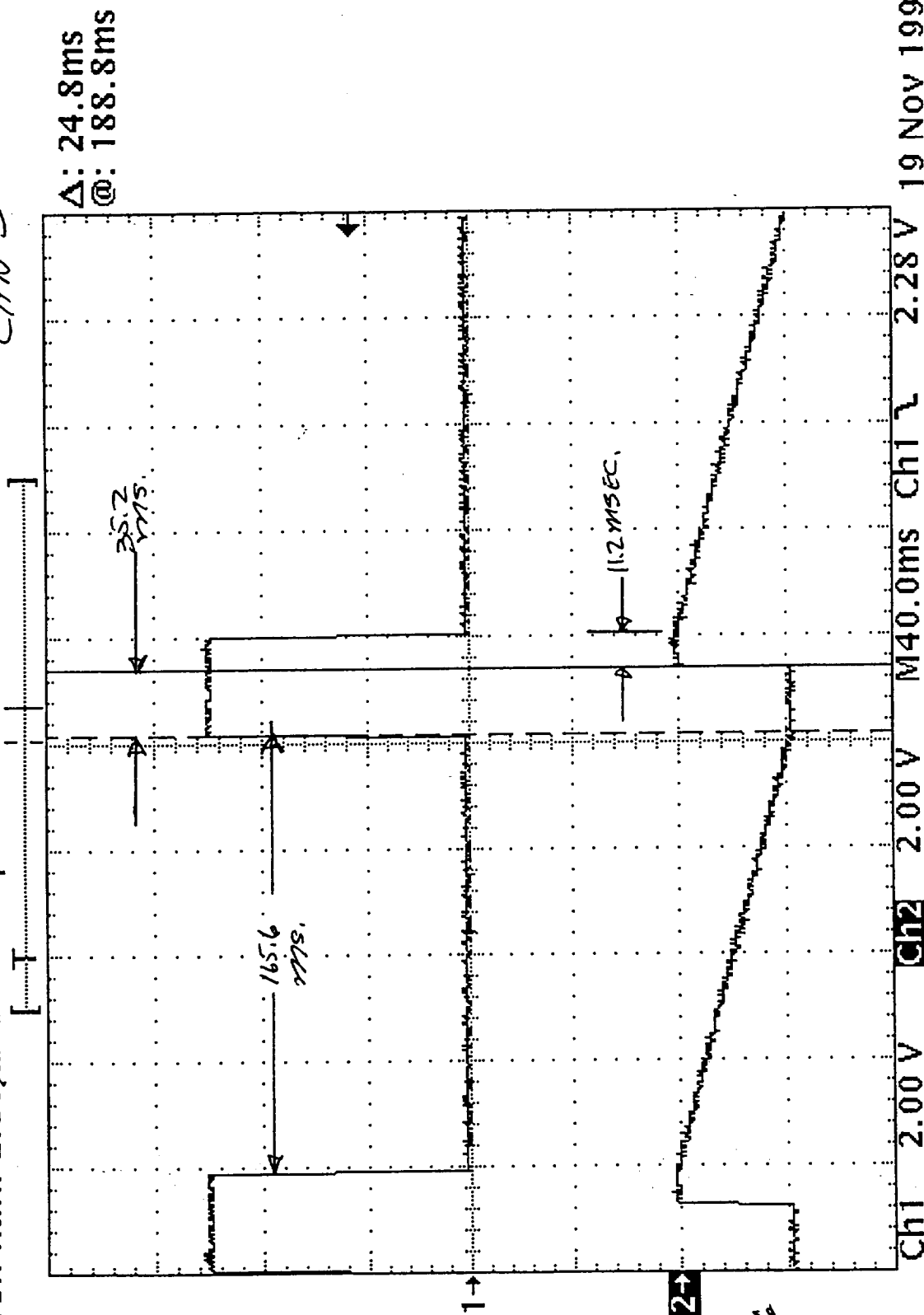
—

—

—

7Ds 37
CHN 3

Tek Run: 2.50ks/s Sample



19 NOV 1999
21:38:11

I/H
57-24

ANALOG
OUT 3
CHN 3
57-8

9/0: 748613 OP: 0810 1ST CPT
9/N: 1331720-3-II SN: 102

139
T

TEST ENG:

DATE: NOV 19 99

—

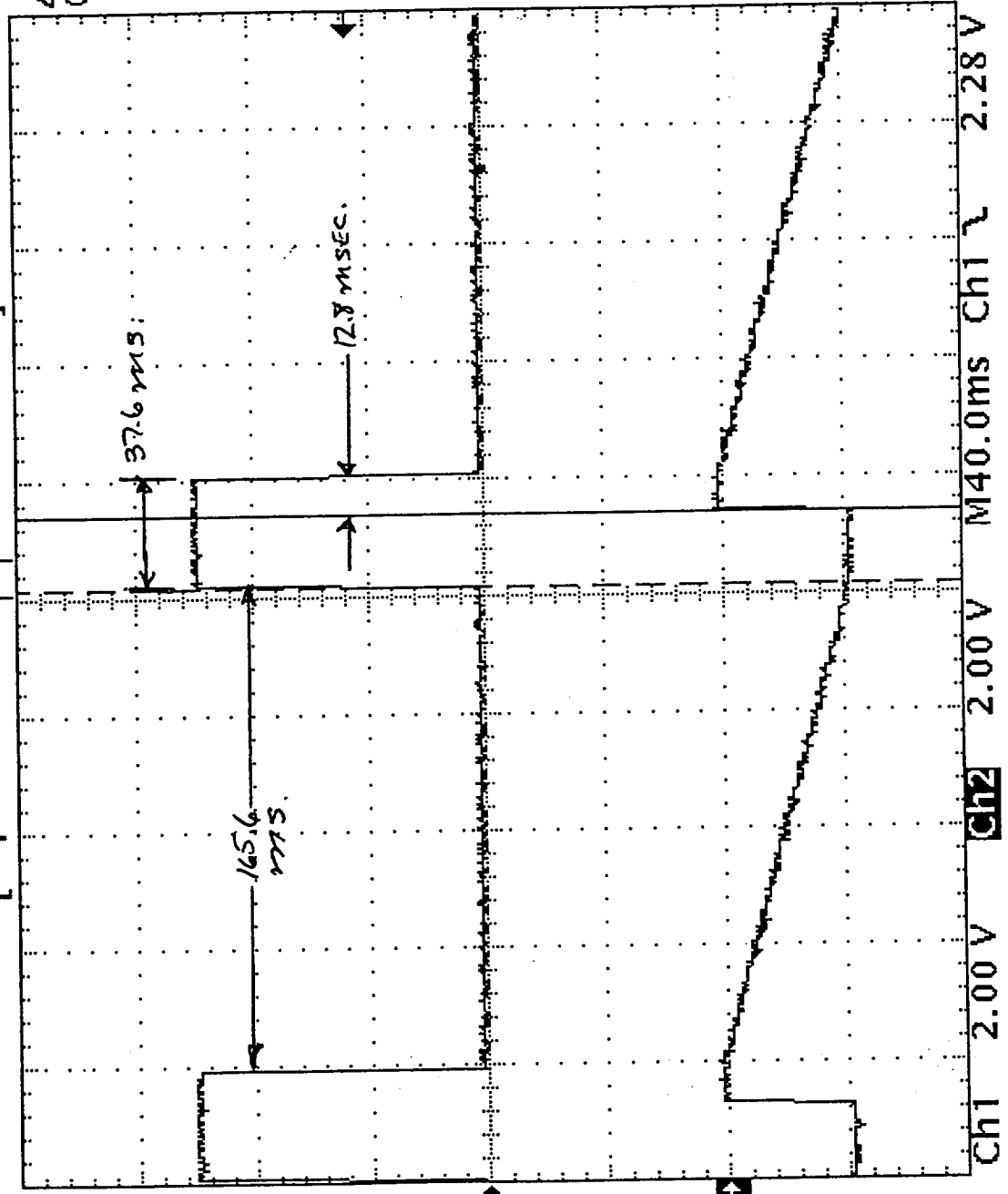
—

—

7DS 37
CAN 4

Tek Stop: 2.50ks/s 23 Acqs

Δ : 24.8ms
@: 188.8ms



1/4
57-24

2-
57-9
CAN 4

19 NOV 1999
21:44:13

S/O: 748613 OP: 0810 1ST CPT
S/N: 1331720-3-IT SN: 109

TEST ENG: $\frac{109}{T}$

DATE: NOV 19 99

TEST DATA SHEET 38
Integration Time (Analog Output) Verification (Paragraph 3.2.4.3.6.2)

ATTACH PHOTOGRAPH OR PLOT HERE

Channel 05
Frequency: 53.596 GHz

INTEGRATION (X) *
Measured 165.6 ms
Required 165 ms \pm 10%
Pass/Fail P

HOLD (B-D) *
Measured 24.8 ms
Required 25 ms \pm 10%
Pass/Fail P

DUMP (D) *
Measured 12.8 ms
Required 9 ms to 15 ms
Pass/Fail P

ATTACH PHOTOGRAPH OR PLOT HERE

Channel 06
Frequency: 54.4 GHz

INTEGRATION (X) *
Measured 165.6 ms
Required 165 ms \pm 10%
Pass/Fail P

HOLD (B-D) *
Measured 24.8 ms
Required 25 ms \pm 10%
Pass/Fail P

DUMP (D) *
Measured 12.8 ms
Required 9 ms to 15 ms
Pass/Fail P

* Refer to Figure 2 for waveform configuration.

Circle Test: (CPT) LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

S/N: 109

K. Bail
Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

—

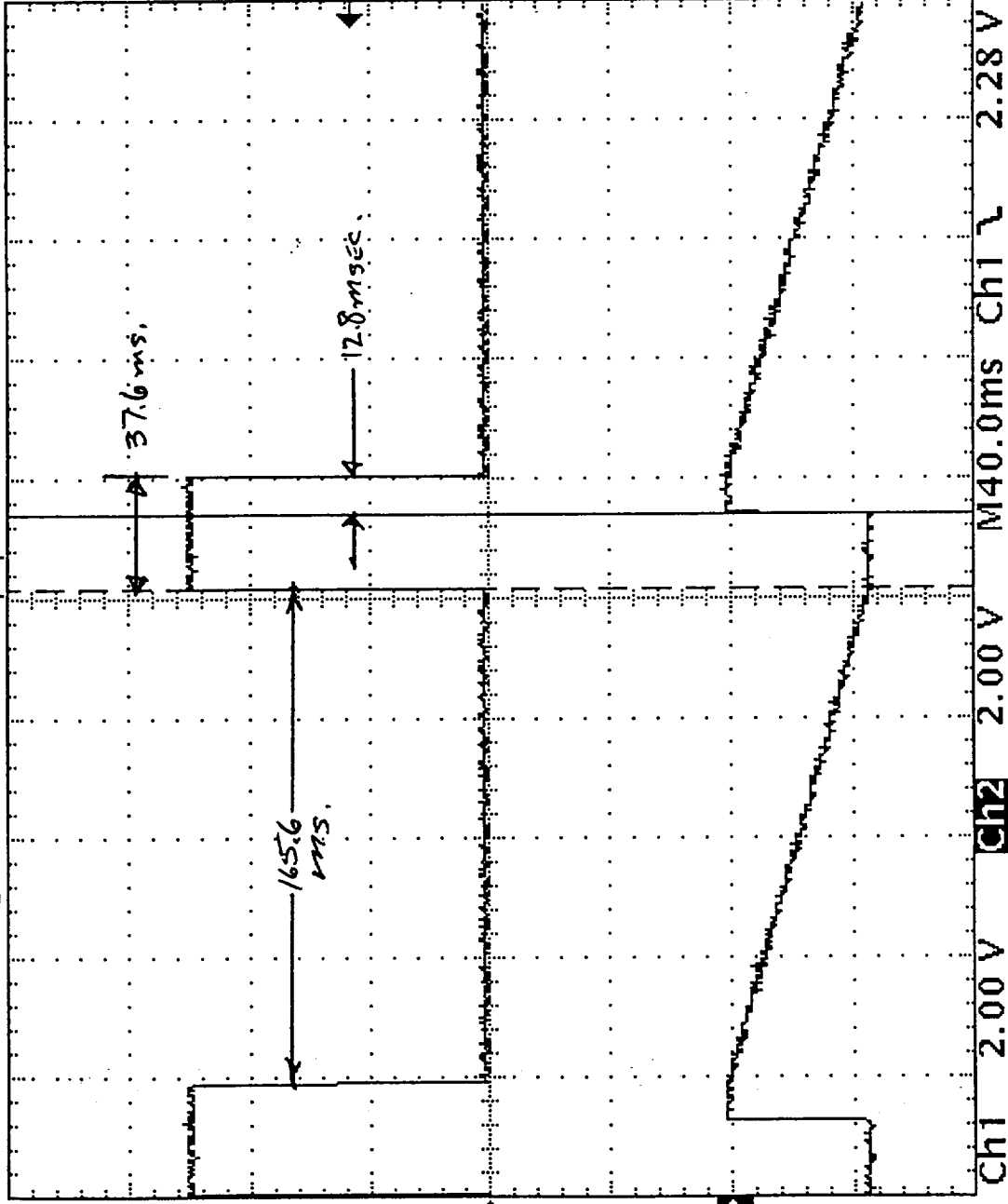
—

—

TDS 38
CHN 5

Tek Stop: 2.50kS/s 11 Acqs

Δ : 24.8ms
@: 188.8ms



5/11
52-5

52-10
CHN 5

19 Nov 1999
21:48:29

NO: 748613 OP: 0810 1ST CPT
NN: 1331720-3-IT SN: 109



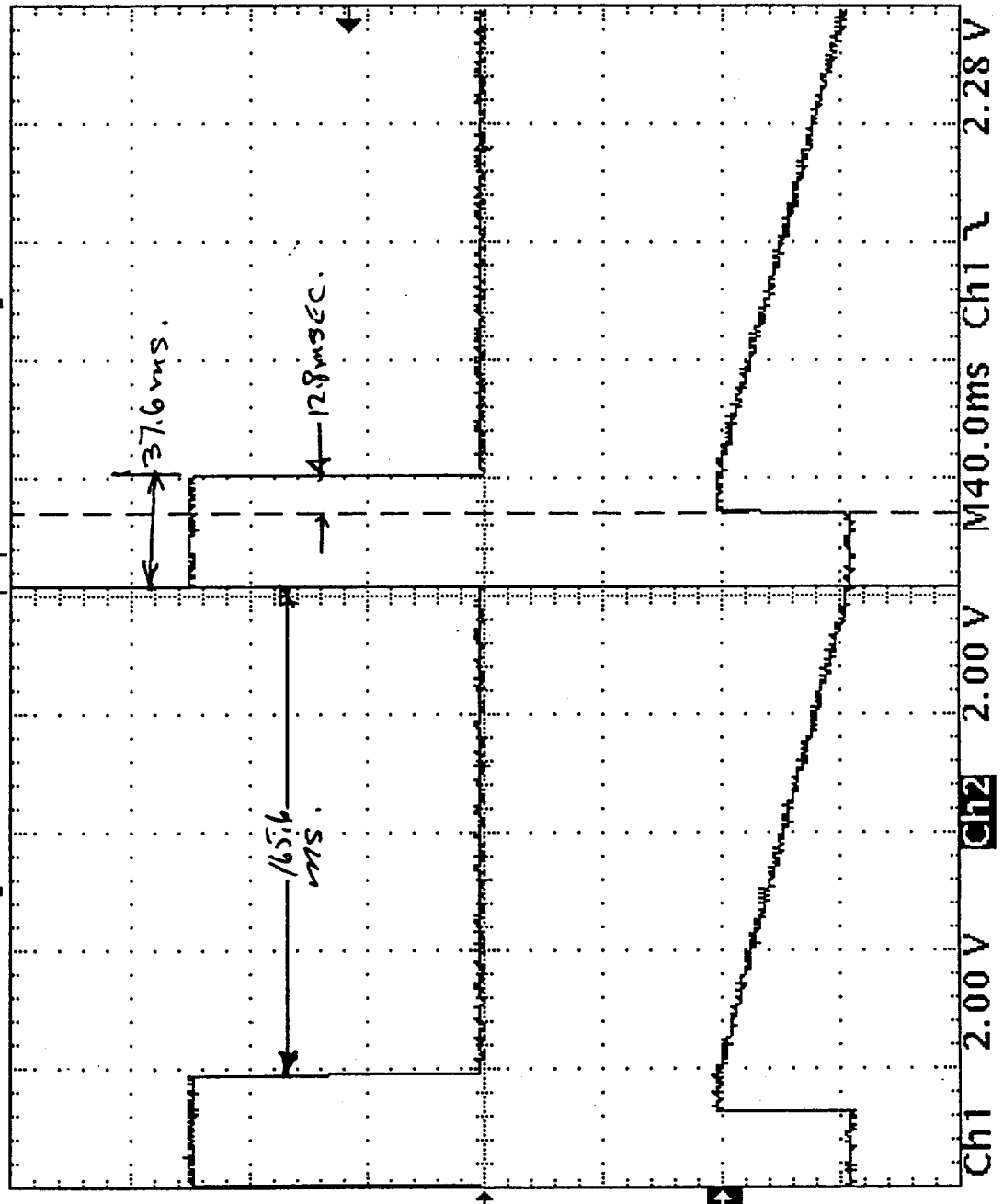
TEST ENG:

DATE: NOV 19 99

TDS 38
CHN6

Tek Stop: 2.50KS/S 9 Acqs

Δ: 24.8ms
@: 164.0ms



57-24
I/H

57-11
CHN6

19 NOV 1999
21:51:43

S/O: 748613 OP: 0810 1ST CPT
S/N: 1331730-3-II S/N: 109

TEST ENG:
NOV 19 99

TEST DATA SHEET 39
Integration Time (Analog Output) Verification (Paragraph 3.2.4.3.6.2)

ATTACH PHOTOGRAPH OR PLOT HERE

Channel 07
Frequency: 54.94 GHz

INTEGRATION (X) *
Measured 164.8 ms
Required 165 ms $\pm 10\%$
Pass/Fail P

HOLD (B-D) *
Measured 25.6 ms
Required 25 ms $\pm 10\%$
Pass/Fail P

DUMP (D) *
Measured 12.8 ms
Required 9 ms to 15 ms
Pass/Fail P

ATTACH PHOTOGRAPH OR PLOT HERE

Channel 08
Frequency: 55.5 GHz

INTEGRATION (X) *
Measured 165.6 ms
Required 165 ms $\pm 10\%$
Pass/Fail P

HOLD (B-D) *
Measured 24.8 ms
Required 25 ms $\pm 10\%$
Pass/Fail P

DUMP (D) *
Measured 12.8 ms
Required 9 ms to 15 ms
Pass/Fail P

* Refer to Figure 2 for waveform configuration.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109
R. Harris 11/19/99

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

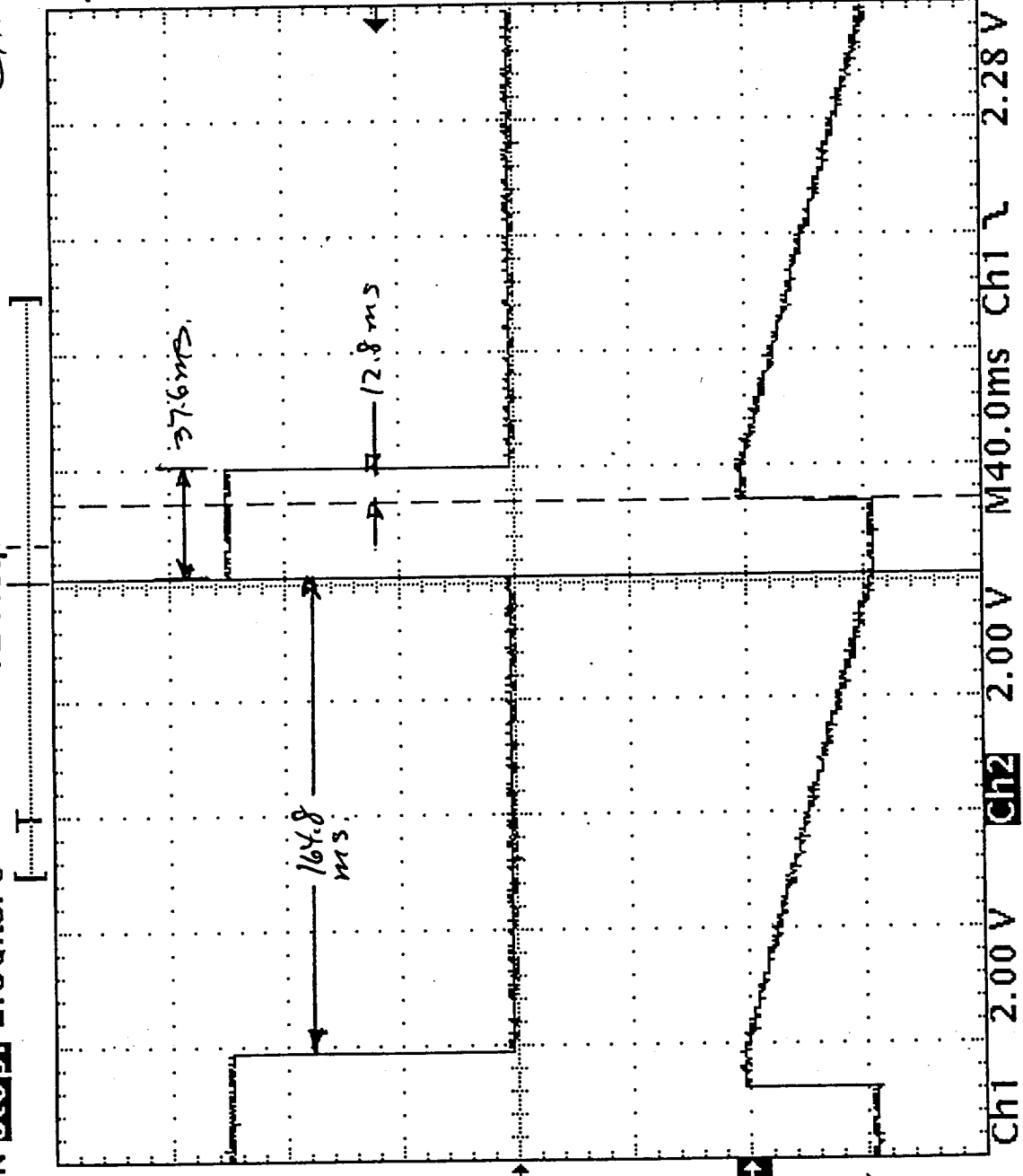
Quality Control

Date

7DS 39
CHW 7

Tek Stop 2.50ks/s 12 Acqs

Δ : 25.6ms
@: 163.2ms



1/4
57-24

57-12
CHW 1

19 Nov 1999
21:55:15

NO: 748613 OP: 0810 1ST CPT
YN: 1331720-3-II SN: 109

139
T

TEST ENG:

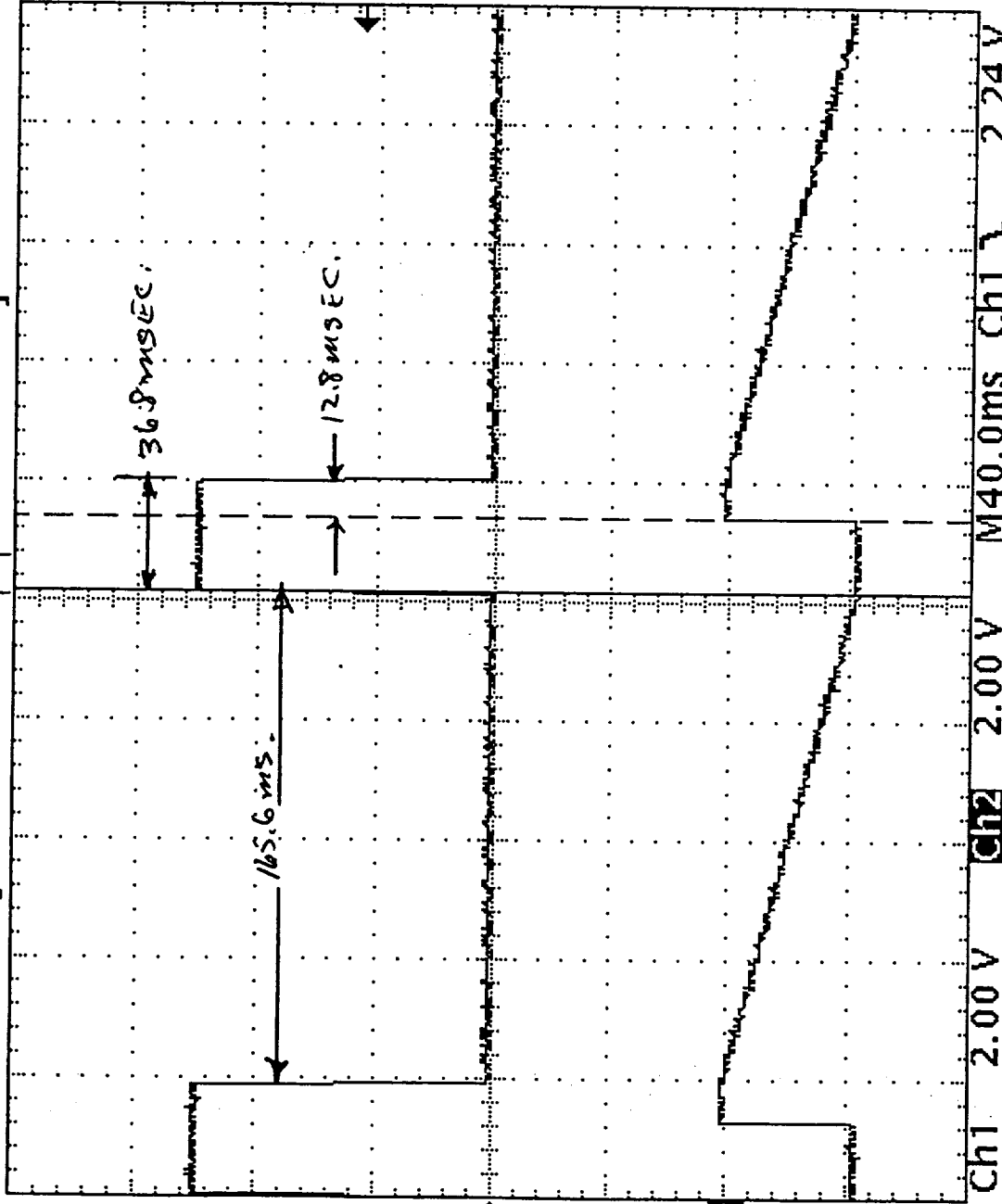
DATE: NOV 19 99

Tek Stop: 2.50ks/s

8 Acqs

7DS 39

[T]



Δ : 24.8ms
@: 164.0ms

1/4
57-24

2
CH1 57-13

NO: 748613 OP: 0810 1ST CPT
N: 1331720-3-IT SN: 109

139
T

TEST ENG:

DATE: NOV 19 99

TEST DATA SHEET 40
Integration Time (Analog Output) Verification (Paragraph 3.2.4.3.6.2)

ATTACH PHOTOGRAPH OR PLOT HERE

Channel 09
Frequency: 57.2903 GHz

INTEGRATION (X) *
Measured 164.8 ms
Required 165 ms \pm 10%
Pass/Fail P

HOLD (B-D) *
Measured 24.8 ms
Required 25 ms \pm 10%
Pass/Fail P

DUMP (D) *
Measured 12.8 ms
Required 9 ms to 15 ms
Pass/Fail P

ATTACH PHOTOGRAPH OR PLOT HERE

Channel 10
Frequency: 57.2903 GHz

INTEGRATION (X) *
Measured 165.6 ms
Required 165 ms \pm 10%
Pass/Fail P

HOLD (B-D) *
Measured 24.8 ms
Required 25 ms \pm 10%
Pass/Fail P

DUMP (D) *
Measured 12.8 ms
Required 9 ms to 15 ms
Pass/Fail P

* Refer to Figure 2 for waveform configuration.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

SN: 109

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

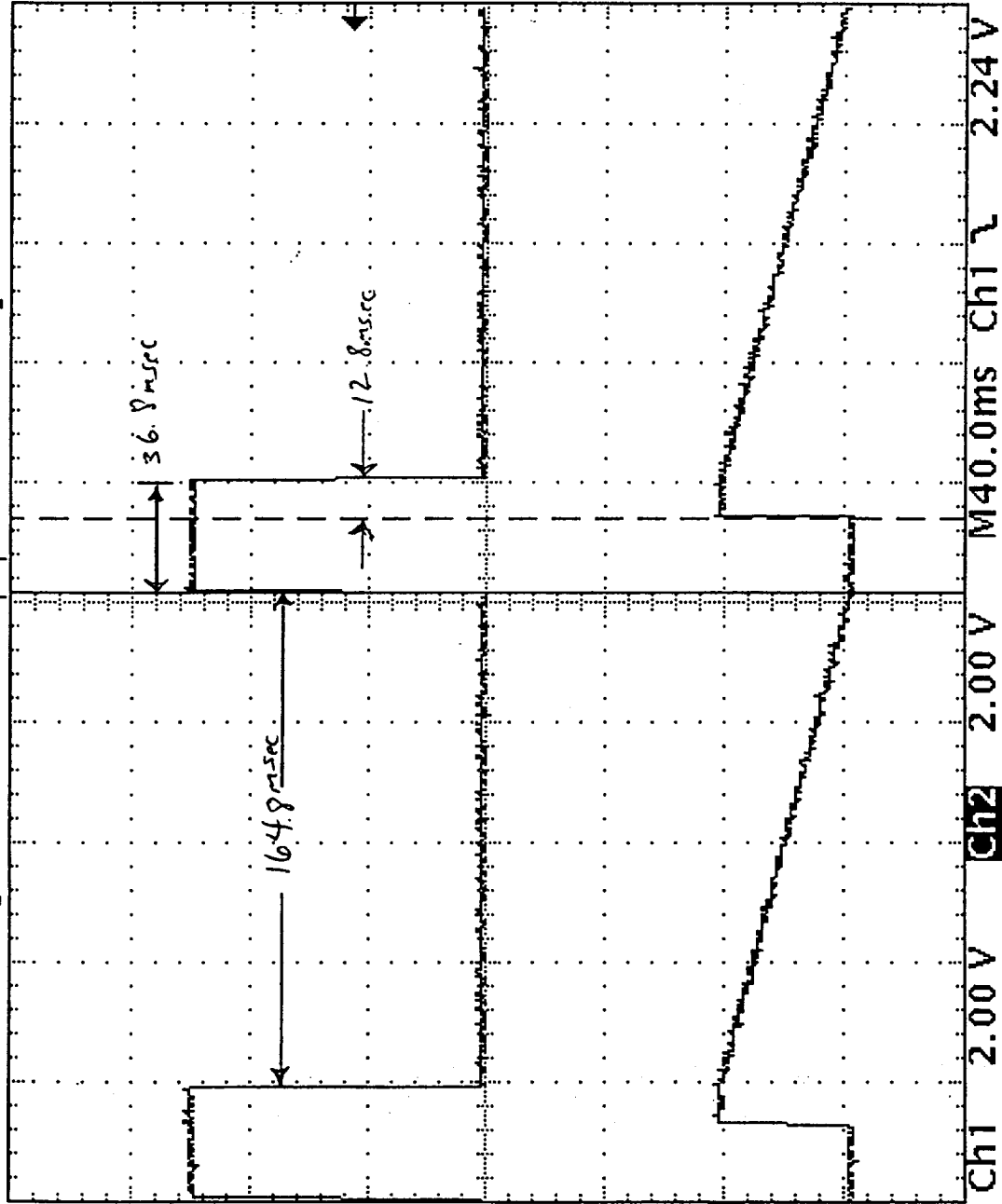
Quality Control

Date

Tek Stop 2.50kS/s

10 Acqs

DDS 40



I/H

57-24

ANALOG CH. 9

57-14

310: 748613 OP: 0810 1ST CPT
P/N: 1331720-3-IT SN: 109

TEST ENG: R. H. S. 10/19/99

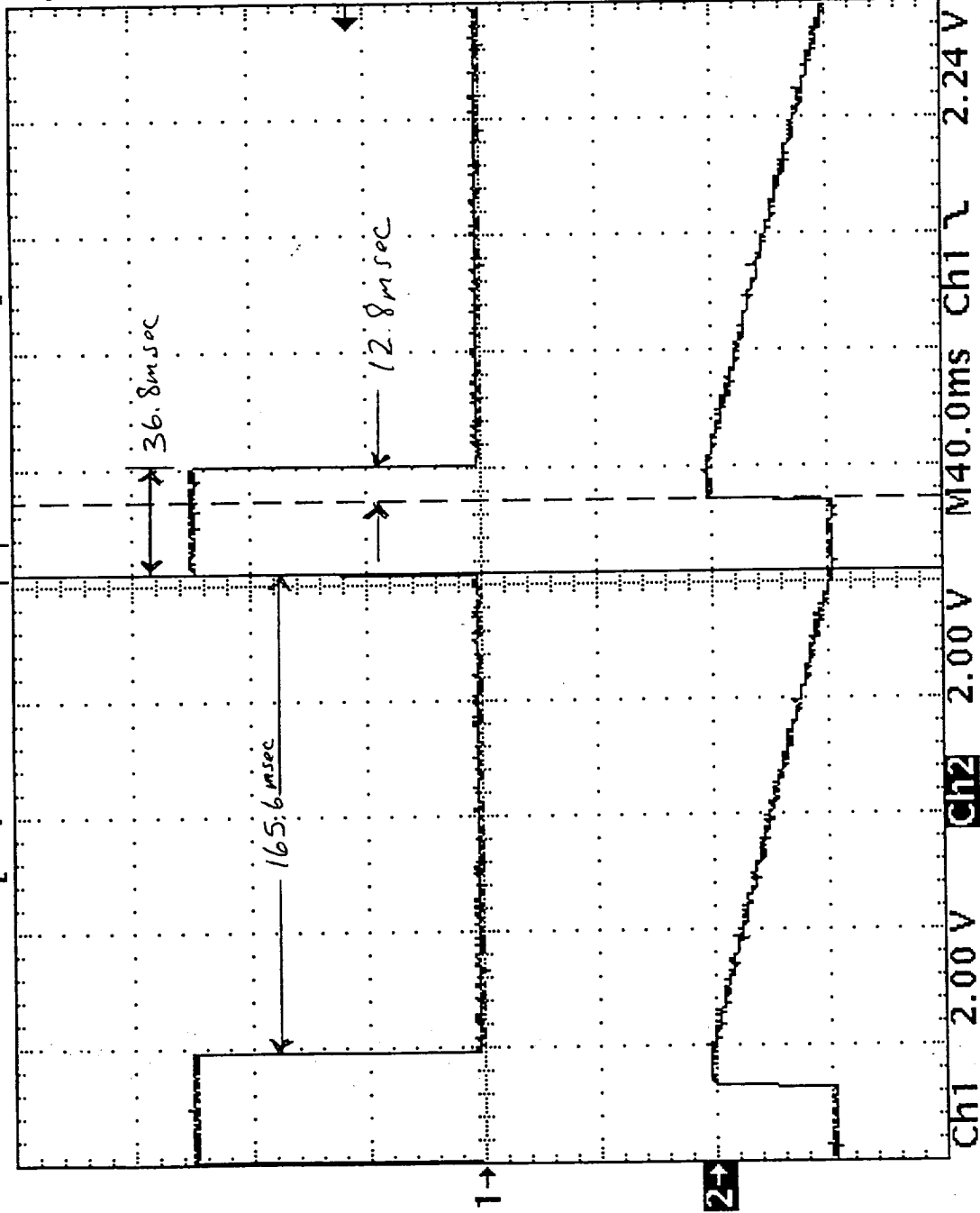
19 NOV 1999 22:00:24

TD S 18 40 1822
11/20/99

Tek Stop 2.50kS/s

7 Acqs

Δ : 24.8ms
@: 164.8ms



I/H
clock

ANALOG
CH. 10
57-27

19 NOV 1999
22:04:43

S/O: 748613 O/A: 0810 1ST CPT
P/N: 1331720-3-IT SN: 109

TEST ENG: DATE:
NOV 19 99

TEST DATA SHEET 41
Integration Time (Analog Output) Verification (Paragraph 3.2.4.3.6.2)

ATTACH PHOTOGRAPH OR PLOT HERE

Channel 11
Frequency: 57.3903 GHz

INTEGRATION (X) *
Measured 165.6 ms
Required 165 ms \pm 10%
Pass/Fail P

HOLD (B-D) *
Measured 24.8 ms
Required 25 ms \pm 10%
Pass/Fail P

DUMP (D) *
Measured 12.8 ms
Required 9 ms to 15 ms
Pass/Fail P

ATTACH PHOTOGRAPH OR PLOT HERE

Channel 12
Frequency: 57.3903 GHz

INTEGRATION (X) *
Measured 165.6 ms
Required 165 ms \pm 10%
Pass/Fail P

HOLD (B-D) *
Measured 24.8 ms
Required 25 ms \pm 10%
Pass/Fail P

DUMP (D) *
Measured 12.8 ms
Required 9 ms to 15 ms
Pass/Fail P

* Refer to Figure 2 for waveform configuration.

Circle Test: (CPT) LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 248613

S/N: 709

K. H. S.
Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

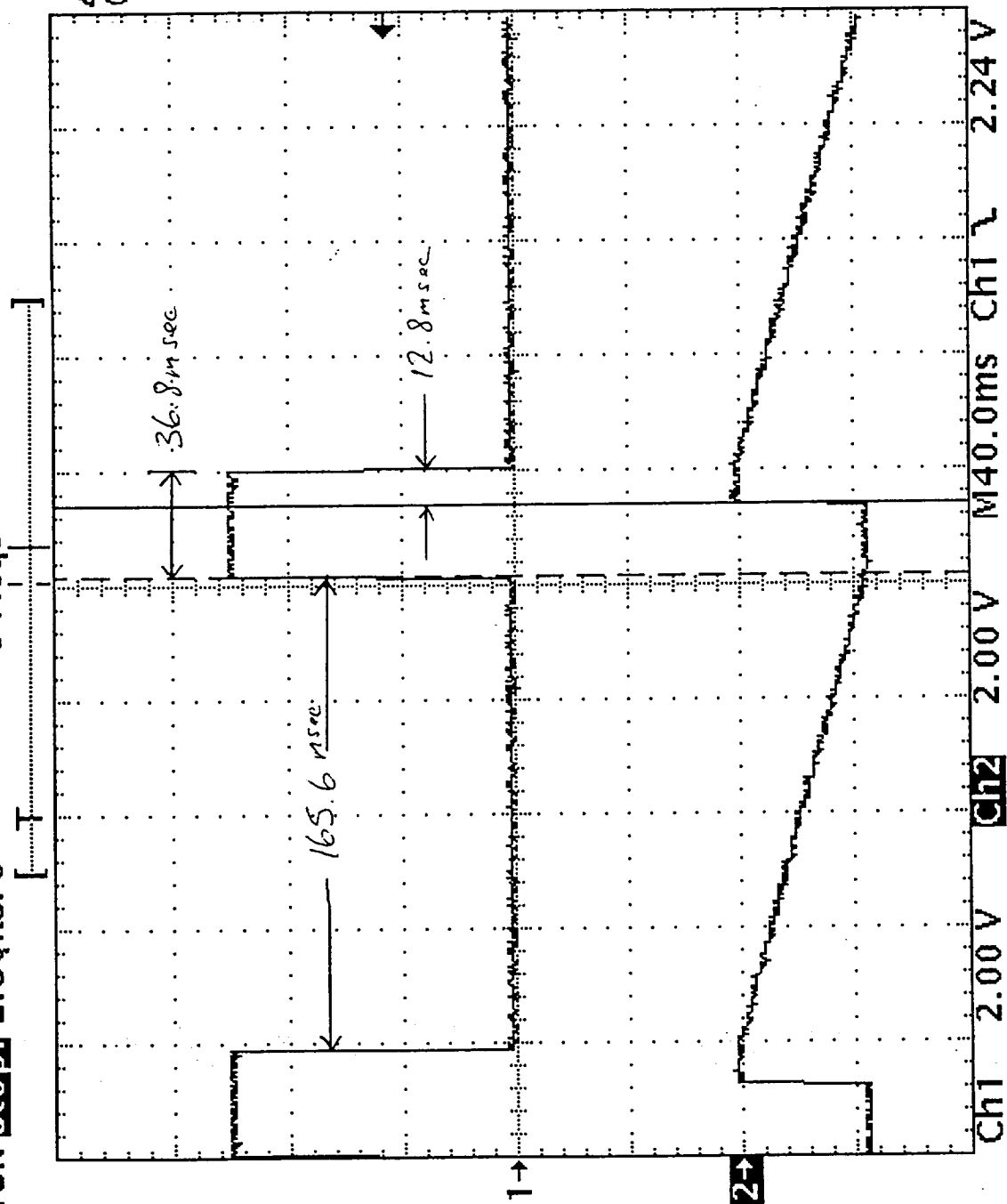
Quality Control

Date

7DS41

Tek Stop: 2.50KS/s 9 Acqs

Δ : 24.8ms
@: 188.8ms



I/H

CLOCK

ANALOG
CH1/1
57-28

19 NOV 1999
22:09:22

$\frac{100}{T}$

SO: 748613 OP: 0810 1ST CPT
P/N: 1331720-3-II SN: 109

TEST ENG: DATE: NOV 19 99

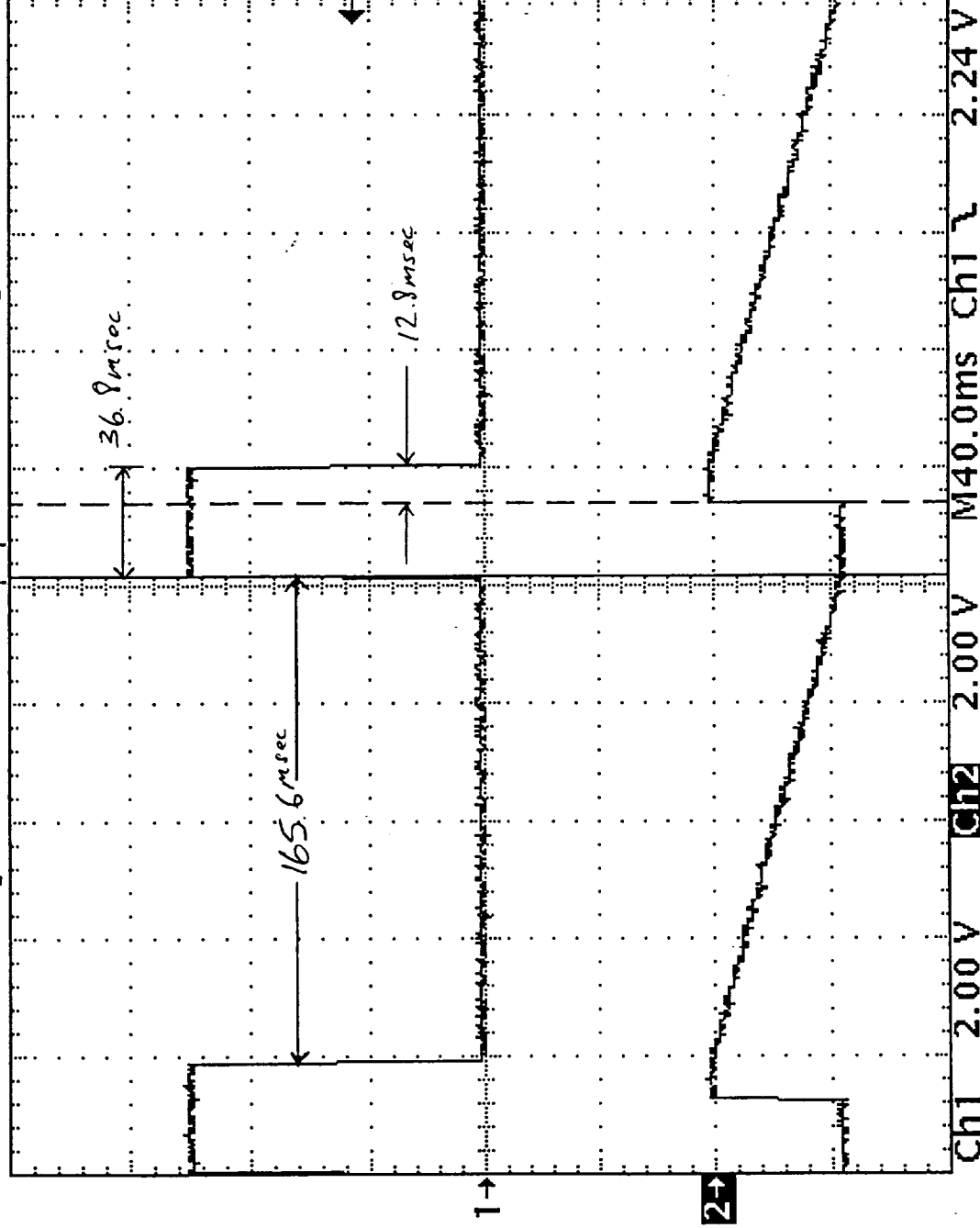
TDS 41

Tek Stop: 2.50ks/s

6 Acqs

[T]

Δ : 24.8ms
@: 164.0ms



I/H
clock

ANALOG
CH 12
57-29

19 Nov 1999
22:13:05

5.0.748613 R. Hill 11/18/99

(24/200)

TEST DATA SHEET 42
Integration Time (Analog Output) Verification (Paragraph 3.2.4.3.6.2)

ATTACH PHOTOGRAPH OR PLOT HERE

Channel 13
Frequency: 57.3903 GHz

INTEGRATION (X) *
Measured 165.6 ms
Required 165 ms \pm 10%
Pass/Fail P

HOLD (B-D) *
Measured 24.8 ms
Required 25 ms \pm 10%
Pass/Fail P

DUMP (D) *
Measured 12.8 ms
Required 9 ms to 15 ms
Pass/Fail P

ATTACH PHOTOGRAPH OR PLOT HERE

Channel 14
Frequency: 57.3903 GHz

INTEGRATION (X) *
Measured 165.6 ms
Required 165 ms \pm 10%
Pass/Fail P

HOLD (B-D) *
Measured 24.8 ms
Required 25 ms \pm 10%
Pass/Fail P

DUMP (D) *
Measured 12.8 ms
Required 9 ms to 15 ms
Pass/Fail P

* Refer to Figure 2 for waveform configuration.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

SN: 109

R. Hill
Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

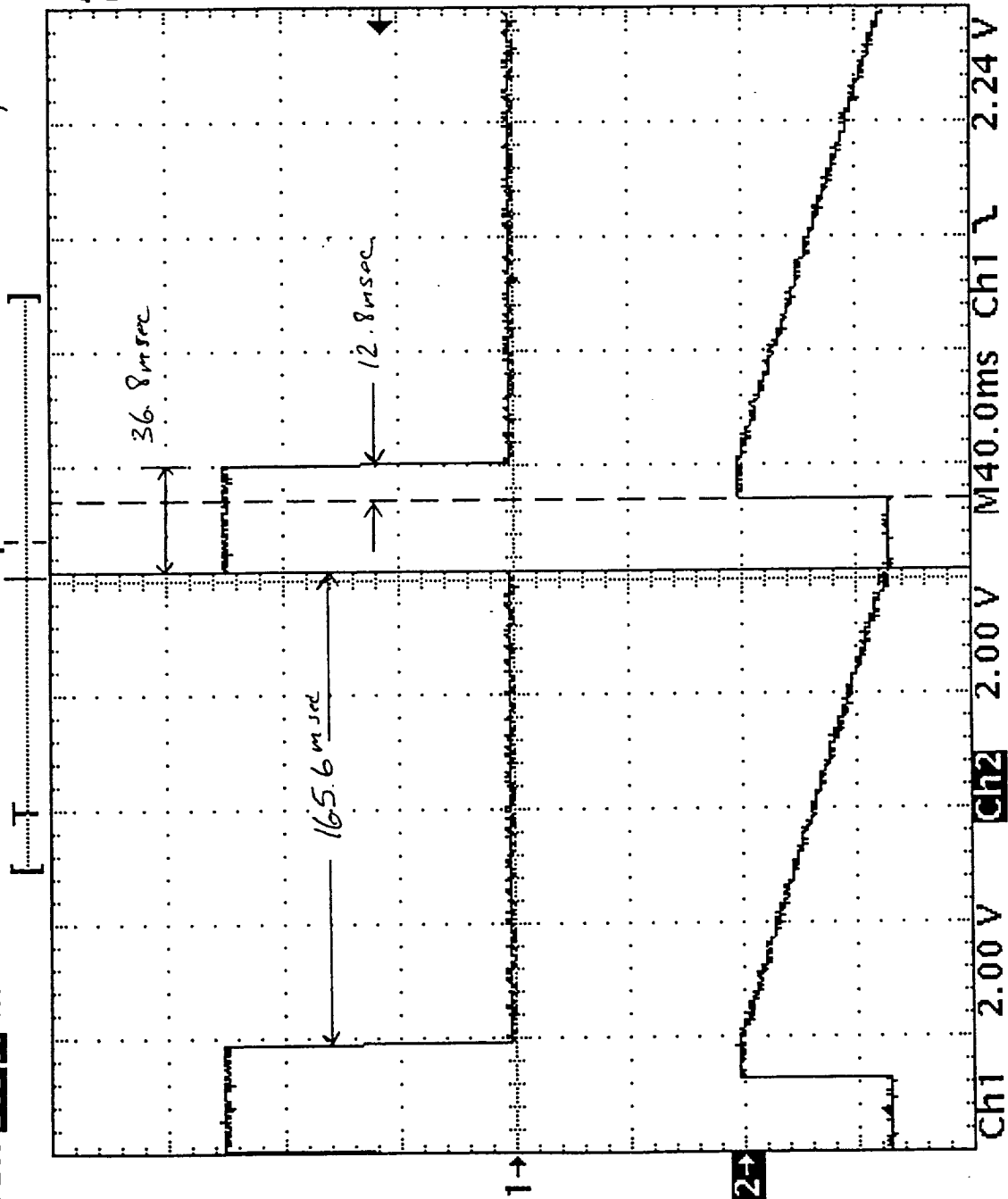
Quality Control

Date

TDS 42

Tek stop: 2.50ks/s

13 Acqs.



19 Nov 1999

22:16:27

5:0. 748613 R. 665 11/19/99

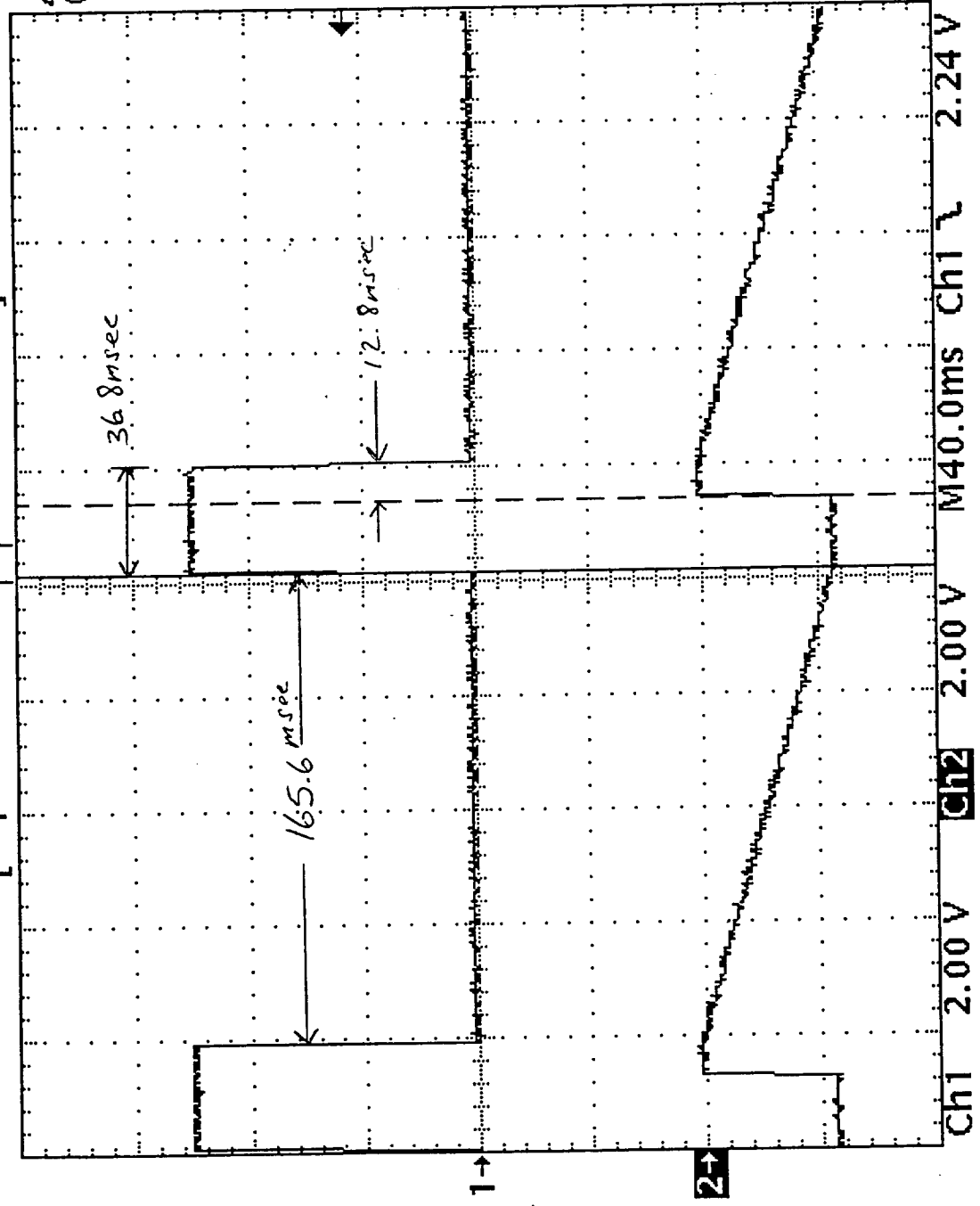
24.00

4N#C06
C#13
T7-30

TD542

Tek Stop 2.50ks/s 4 Acqs

Δ : 24.8ms
@: 164.0ms



I/H
CLOCK

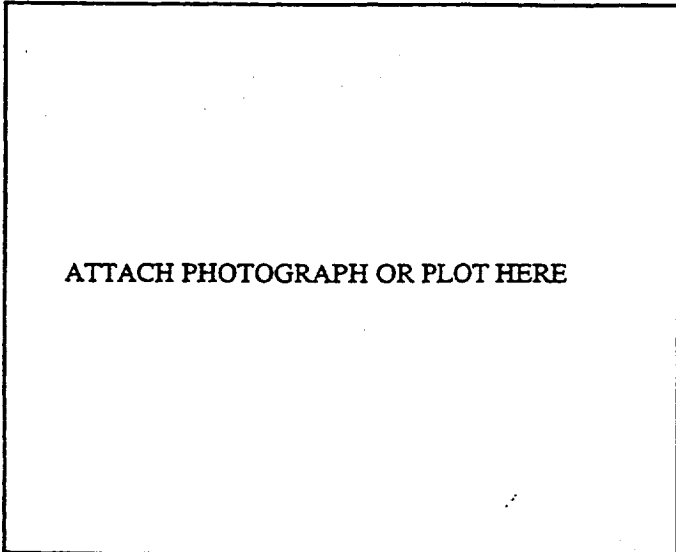
NAALOG
H 14
57-31

19 Nov 1999
22:19:32

5.0 748613 R. Bair 11/19/99

24
000

TEST DATA SHEET 43
Integration Time (Analog Output) Verification (Paragraph 3.2.4.3.6.2)



Channel 15
Frequency: 89 GHz

INTEGRATION (X) *
Measured 165.6 ms
Required 165 ms \pm 10%
Pass/Fail P

HOLD (B-D) *
Measured 24.8 ms
Required 25 ms \pm 10%
Pass/Fail P

DUMP (D) *
Measured 12.8 ms
Required 9 ms to 15 ms
Pass/Fail P

* Refer to Figure 2 for waveform configuration.

Circle Test: (CPT) LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

S/N: 109

R. Hilt
Test Systems Engineer

11/19/99
Date

NOV 19 99
Customer Representative
(Flight Hardware Only)

Date

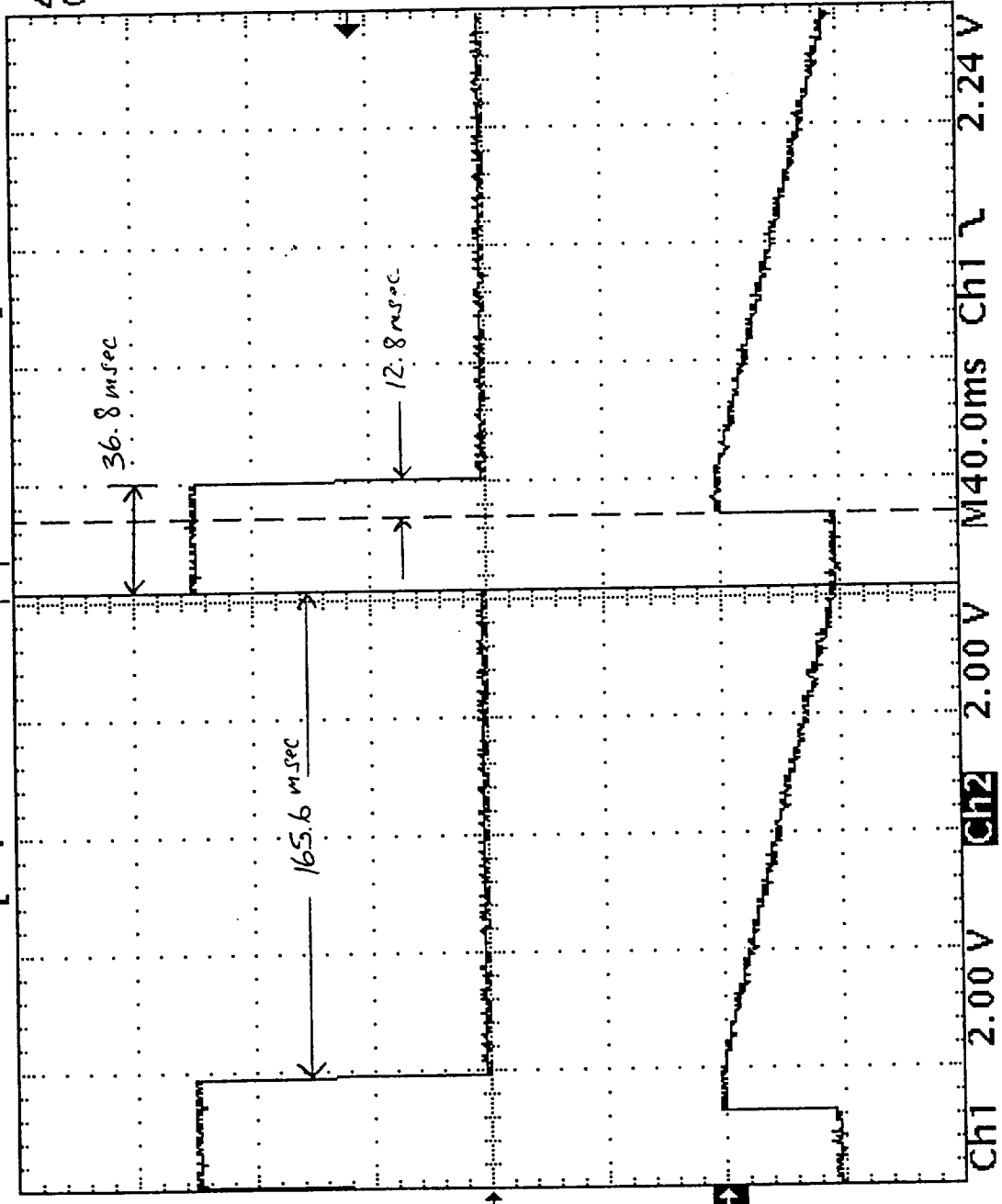
NOV 19 99
Quality Control

Date

TDS 43

Tek STOP 2.50KS/s 9 Acqs

Δ : 24.8ms
@: 164.0ms



I/H

CLOCK

ANALOG

CH 15

57-32

19 Nov 1999
22:22:36

2.68 11/18/99

S.O. 748613

200

6 Apr 99

TEST DATA SHEET 44

PLLO No. 1 Verification (Paragraph 3.2.4.3.6.3)

PLLO No. 2 Verification (Paragraph 3.2.4.3.6.4)

PLLO NO. 1
PLLO No. 1 dc Level 4.40V Required: * Pass/Fail P

PLLO NO. 2
PLLO No. 2 dc Level 4.39V Required: * Pass/Fail P

* -15 to +15 V dc level for S/N 101 - S/N 104, 4.0 ± 1.0 V for S/N 105 and above.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613

S/N: 109

R. Hail
Test Systems Engineer

11/19/99
Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 45

**Digital-A/GSE Mode-1 Synch Sequence,
Unit I.D./Serial Number and Digital-B Serial Data Verification
Sections [I], [III], and [III] (Paragraph 3.2.4.3.7.2)**

Step	Element (For Ref)	Description	Recorded Value	Required Value	Pass/Fail
[I]	0001	Sync Sequence Byte 1		255	
	0002	Sync Sequence Byte 2		255	
	0003	Sync Sequence Byte 3		255	
[II]	0004	Unit I.D. and Serial N		*	
[III]	0005	Digital-B Data Byte 1		0	
	0006	Digital-B Data Byte 2		14	
	0007	Digital-B Data Byte 3		0	
	0008	Digital-B Data Byte 4		0	

* AMSU A1 Identification Words
(data entered in decimal system)

Binary

Decimal

AMSU-A1 S/N 101

00000001

1

AMSU-A1 S/N 102

00000101

5

AMSU-A1 S/N 103

00001001

9

AMSU-A1 S/N 104

00001101

13

AMSU-A1 S/N 105

00010001

17

AMSU-A1 S/N 106

00010101

21

AMSU-A1 S/N 107

00011001

25

AMSU-A1 S/N 108

00011101

29

AMSU-A1 S/N 109

00100001

33

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date _____

**Customer Representative
(Flight Hardware Only)**

Date _____

Quality Control

Date _____

TEST DATA SHEET 46 (Sheet 1 of 2)
Reflector Position (Paragraphs 3.2.4.3.7.2 - 3.2.4.3.7.7)

3.2.4.3.7.2 Digital-A/GSE Mode-1 Reflector Position Section [IV] ***

BP	A1-1 Reflector				A1-2 Reflector			
	Element (For Ref)	Position*	Required**	Pass/Fail	Element (For Ref)	Position*	Required**	Pass/Fail
06	0184				0186			
CC	354				356			
WC	694				696			

3.2.4.3.7.3 Digital-A/GSE Mode-2 Reflector Position Section [IV] ***

BP	A1-1 Reflector				A1-2 Reflector			
	Element (For Ref)	Position*	Required**	Pass/Fail	Element (For Ref)	Position*	Required**	Pass/Fail
01	0014				0016			

3.2.4.3.7.4 Digital-A/GSE Mode-3 Reflector Position Section [IV] ***

A1-1 Reflector			A1-2 Reflector		
Observed	Required**	Pass/Fail	Observed	Required**	Pass/Fail
	****			****	

- * Actual counts from computer printout. Rewriting counts on this data sheet is optional.
 ** Required range for instrument serial number from TDS 6 of AE-26002/1 ± 10 counts. Rewriting range on this data sheet is optional.
 *** GSE Modes do not require verification or testing for PFM & FM modules
 **** Observe that both A1-1 and A1-2 reflectors increment one step every 8 seconds.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 46 (Sheet 2 of 2)
Reflector Position (Paragraphs 3.2.4.3.7.2 - 3.2.4.3.7.7)

3.2.4.3.7.5 Digital-A/GSE Mode-4 Reflector Position Section [IV] ***

BP	A1-1 Reflector				A1-2 Reflector			
	Element (For Ref)	Position*	Required**	Pass/Fail	Element (For Ref)	Position*	Required**	Pass/Fail
30	1000				1002			

3.2.4.3.7.6 Digital-A/GSE Mode-5 Reflector Position Section [IV] ***

BP	A1-1 Reflector				A1-2 Reflector			
	Element (For Ref)	Position*	Required**	Pass/Fail	Element (For Ref)	Position*	Required**	Pass/Fail
06	0184				0186			

3.2.4.3.7.7 Digital-A/GSE Mode-7 Reflector Position Section [IV] ***

BP	A1-1 Reflector				A1-2 Reflector			
	Element (For Ref)	Position*	Required**	Pass/Fail	Element (For Ref)	Position*	Required**	Pass/Fail
06	0184				0186			

- * Actual counts from computer printout. Rewriting counts on this data sheet is optional.
- ** Required range for instrument serial number from TDS 6 of AE-26002/1 ± 10 counts. Rewriting range on this data sheet is optional.
- *** GSE Modes do not require verification or testing for PFM & FM modules

N / R 11/20/99

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 47
Digital-A/GSE Mode-1 Radiometer Data Section [V] (Paragraph 3.2.4.3.7.2)

BP	A1-1 Reflector			A1-2 Reflector		
	Channel-3*	Required**	Pass/Fail	Channel-9*	Required**	Pass/Fail
01						
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
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* Actual counts from computer printout. Rewriting counts on this data sheet is optional.

** Required = $16,500 \pm 4000$ counts.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer _____ Date _____

Customer Representative _____ Date _____
(Flight Hardware Only)

Quality Control _____ Date _____

TEST DATA SHEET 48 (Sheet 1 of 2)
Digital-A/GSE Mode-1 Temperature Sensors Section [VI] (Paragraph 3.2.4.3.7.2)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1090	A1-1 Warm Load 1		25 ± 15	
1092	A1-1 Warm Load 2		25 ± 15	
1094	A1-1 Warm Load 3		25 ± 15	
1096	A1-1 Warm Load 4		25 ± 15	
1098	A1-1 Warm Load Center		25 ± 15	
1100	A1-2 Warm Load 1		25 ± 15	
1102	A1-2 Warm Load 2		25 ± 15	
1104	A1-2 Warm Load 3		25 ± 15	
1106	A1-2 Warm Load 4		25 ± 15	
1108	A1-2 Warm Load Center		25 ± 15	
1110	Local Oscillator Channel 7		25 ± 15	
1112	Local Oscillator Channel 8		25 ± 15	
1114	Local Oscillator Channel 15	N/A	25 ± 15	
1116	PLL LO #2 Channels 9-14		25 ± 15	
1118	PLL LO #1 Channels 9-14		25 ± 15	
1120	PLLO (Reference Oscillator)**/ Not used ***	(13.9 T)		
1122	Mixer I.F. Amp. Channel 3	11/20/99	25 ± 15	
1124	Mixer I.F. Amp. Channel 4		25 ± 15	
1126	Mixer I.F. Amp. Channel 5		25 ± 15	
1128	Mixer I.F. Amp. Channel 6		25 ± 15	
1130	Mixer I.F. Amp. Channel 7		25 ± 15	
1132	Mixer I.F. Amp. Channel 8		25 ± 15	
1134	Mixer I.F. Amp. Channels 9-14		25 ± 15	
1136	Mixer I.F. Amp. Channel 15		25 ± 15	

- * Value is from the STE printout sheets. Copying data to this sheet is optional.
 ** For S/N 101 through 104.
 *** For S/N 105 and up.

(Continued on Sheet 2)

6 Apr 99

TEST DATA SHEET 48 (Sheet 2 of 2)
Digital-A/GSE Mode-1 Temperature Sensors Section [VI] (Paragraph 3.2.4.3.7.2)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1138	I.F. Amp. Channel 11-14		25 ± 15	
1140	I.F. Amp. Channel 9		25 ± 15	
1142	I.F. Amp. Channel 10		25 ± 15	
1144	I.F. Amp. Channel 11		25 ± 15	
1146	DC/DC Converter		25 ± 15	
1148	I.F. Amp. Channel 13		25 ± 15	
1150	I.F. Amp. Channel 14		25 ± 15	
1152	I.F. Amp. Channel 12		25 ± 15	
1154	RF Shelf A1-1		25 ± 15	
1156	RF Shelf A1-2		25 ± 15	
1158	Detector Preamp Assy.		25 ± 15	
1160	Scan Motor A1-1		25 ± 15	
1162	Scan Motor A1-2		25 ± 15	
1164	Feed Horn A1-1		25 ± 15	
1166	Feed Horn A1-2		25 ± 15	
1168	R.F. Mux A1-1		25 ± 15	
1170	R.F. Mux A1-2		25 ± 15	
1172	Local Oscillator Channel 3		25 ± 15	
1174	Local Oscillator Channel 4		25 ± 15	
1176	Local Oscillator Channel 5		25 ± 15	
1178	Local Oscillator Channel 6		25 ± 15	
1180	Temp Sensor Ref Voltage Count		**	

* Value is from the STE printout sheets. Copying data to this sheet is optional.

** = Count of 24,552 +1765,-1308.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 49
Receiver Input Signals (Paragraph 3.2.4.4.1)

CH 9 through 14 PLLO	PRT Temp (°C)		Measured * Frequency	Requirements **	Pass/ Fail
PLLO No. 1	PLO No. 1	Xtal *** Osc.			
	34.4°	34.4° 12.6°	57.290340 GHz	57290.334 MHz ± 50 kHz	P
PLLO No. 2	PLO No. 2	Xtal *** Osc.			
	31.4°		57.290340 GHz	57290.334 MHz ± 50 kHz	P

* Attach spectrum analyzer plots.

** = At 18°C

*** PRT not connected on S/N 105 and above.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109

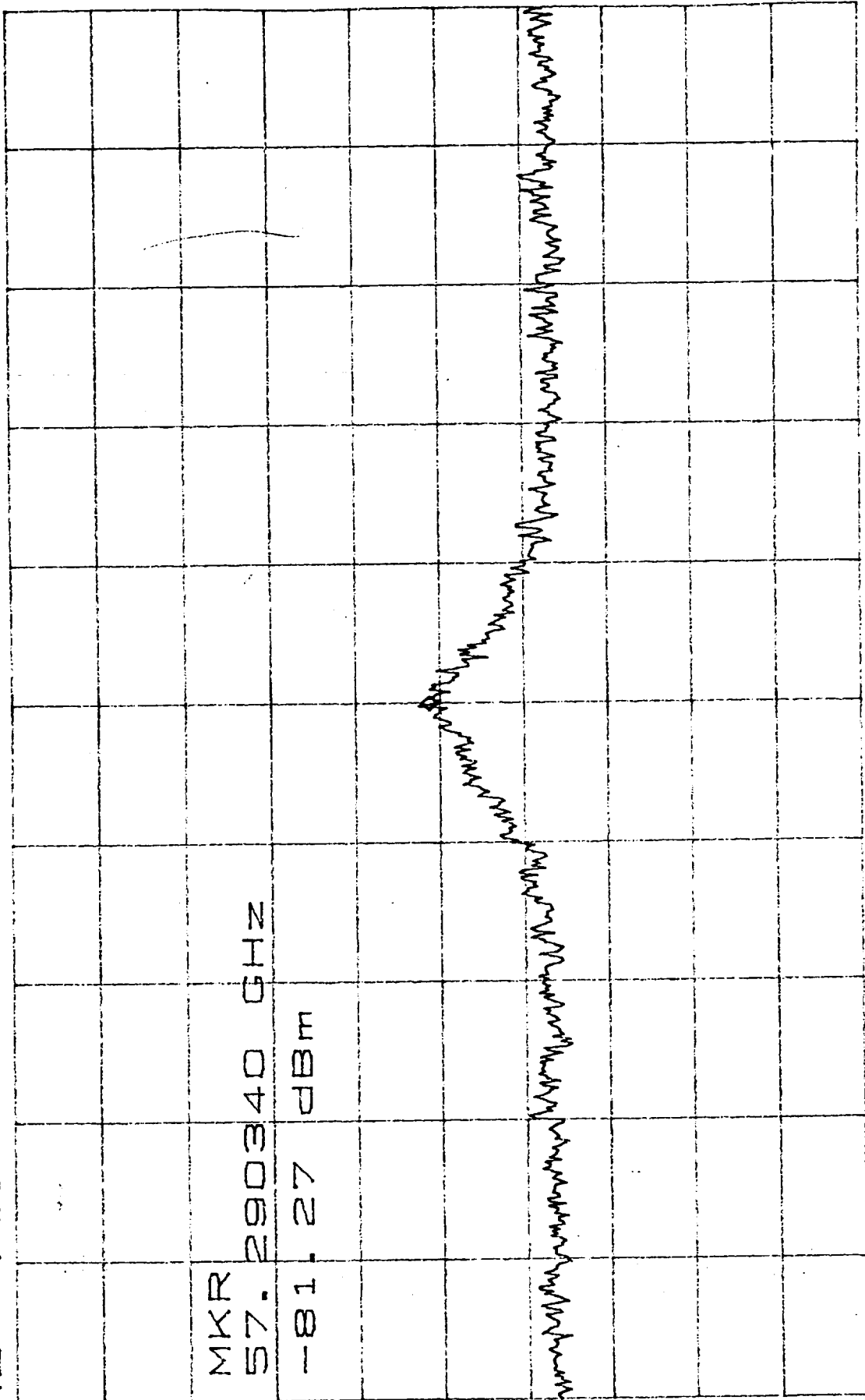
K. High 11/19/99
Test Systems Engineer Date

11-19-99
Customer Representative Date
(Flight Hardware Only)

11/19/99
Quality Control Date

723 49

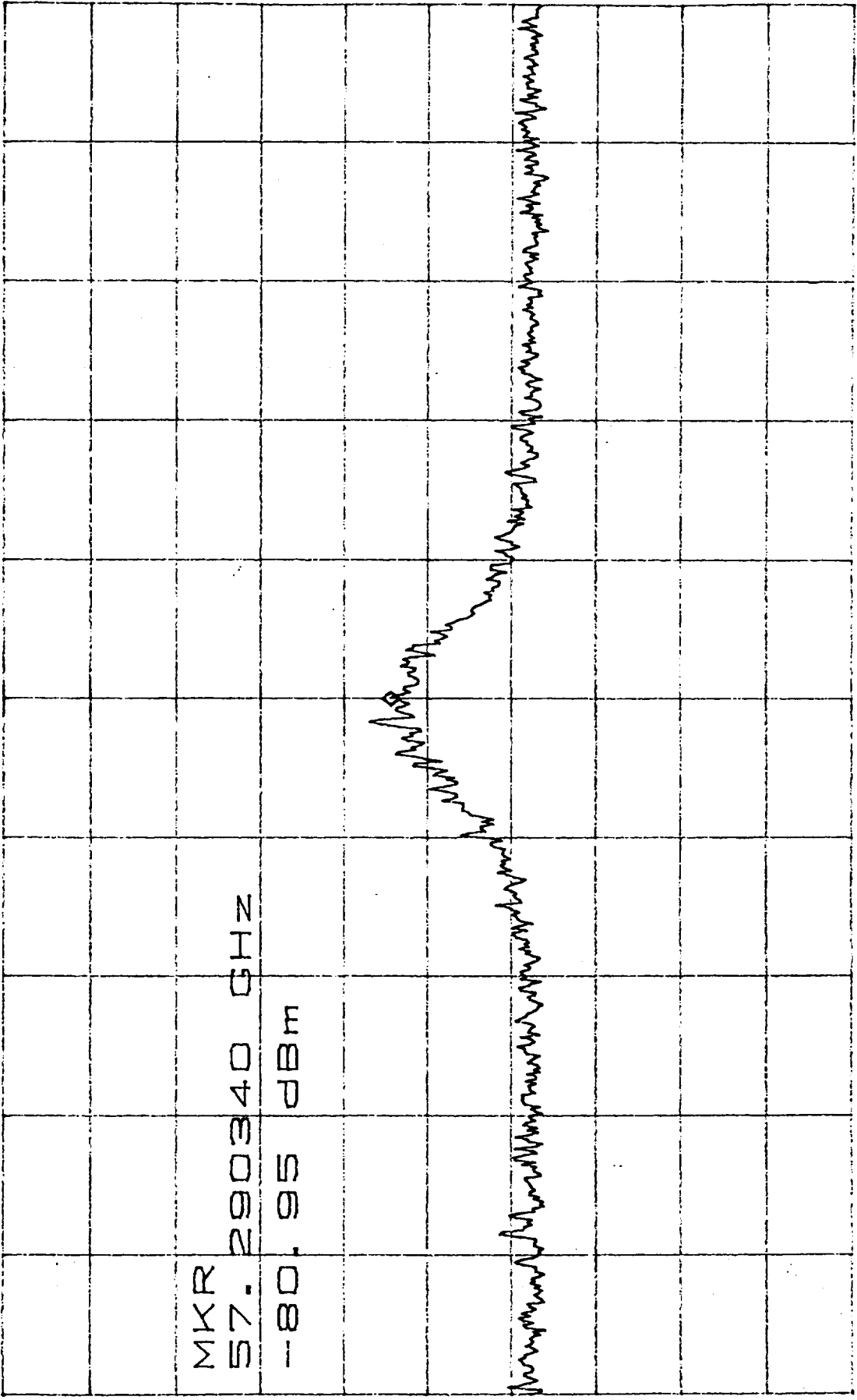
CL 30.0dB PLO#1 MKR -81.27dBm
RL -76.3dBm 1dB/ 57.290340GHz



D

CENTER 57.290340GHz SPAN 2.000MHz
SIO: 74863N 08:00BKEHET CPT *VBW 300Hz SWP: 170ms DATE: 11/19/99
P/N: 1331720-3-IT SN: 109 TEST ENG: K. Hank

7DS49
 CL 30.0dB PLO#2 MKR -80.95dBm
 RL -76.3dBm 1dB/ 57.290340GHz



CENTER 57.290340GHz SPAN 2.000MHz
 SLO: 7*8883N 03:00:48 CPT *VBW 300Hz SWP 170ms
 P/N: 133177 7-3-II SN: 109 TEST ENG: *[Signature]* DAT: 11/2/89

TEST DATA SHEET 50 (Sheet 1 of 2)
Radiometer "Relative" NEAT Verification* (Paragraph 3.2.4.4.2.2)

Channels 3, 4, 5, 6, 7, 8, and 15. PLL0 No. 1 (Channels 9 through 14)

Channel Number>	3	4	5	6
NEAT (Average of 5 data)	<u>0.238</u>	<u>0.1556</u>	<u>0.1582</u>	<u>0.1408</u>
Pass/Fail	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>
NEAT (Specified) K **	0.40	0.25	0.25	0.25
Channel Number>	7	8	9	10
NEAT (Average of 5 data)	<u>0.149</u>	<u>0.1824</u>	<u>0.1644</u>	<u>0.2078</u>
Pass/Fail	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>
NEAT (Specified) K **	0.25	0.25	0.25	0.40
Channel Number>	11	12	13	14
NEAT (Average of 5 data)	<u>0.2356</u>	<u>0.3318</u>	<u>0.4504</u>	<u>0.8188</u>
Pass/Fail	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>
NEAT (Specified) K **	0.40	0.60	0.80	1.20
Channel Number>	15			
NEAT (Average of 5 data)	<u>0.1394</u>			
Pass/Fail	<u>P</u>			
NEAT (Specified) K **	0.50			

* Baseline data for acceptance tests. Use first CPT or first LPT data along with specification value for pass/fail criteria

** For reference only

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order 748613 S/N: 109
11/19/99

Test Systems Engineer 11/19/99 Date

Quality Control 11/19/99 Date

NOV 19 99
Customer Representative (Flight Hardware Only) Date

TEST DATA SHEET 50 (Sheet 2 of 2)
Radiometer "Relative" NEAT Verification* (Paragraph 3.2.4.4.2.2)

PLLO No. 2 (Channels 9 through 14)

Channel Number>	9	10	11	12
NEAT (Average of 5 data)	<u>0.1762</u>	<u>0.228</u>	<u>0.2522</u>	<u>0.3842</u>
Pass/Fail	<u>P</u>	<u>P</u>	<u>P</u>	<u>P</u>
NEAT (Specified) K **	0.25	0.40	0.40	0.60
Channel Number>	13	14		
NEAT (Average of 5 data)	<u>0.4954</u>	<u>0.8048</u>		
Pass/Fail	<u>P</u>	<u>P</u>		
NEAT (Specified) K **	0.80	1.20		

* Baseline data for acceptance tests. Use first CPT or first LPT data along with specification value for pass/fail criteria

** For reference only

Circle Test: ☒ CPT ☐ LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109



NOV 19 99

Test Systems Engineer



Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

A1.FUNCTIONAL TEST RESULTS 19-NOV-99

15:47:17

CH	WARM TEMP	WARM COUNTS	COLD COUNTS	GAIN	DELTA T
3	298.12	16039.0	13497.0	0.086	0.214
4	298.12	16077.0	13468.0	0.084	0.143
5	298.12	17241.0	14232.0	0.072	0.159
6	297.06	16635.0	13583.0	0.071	0.130
7	297.06	16498.0	13560.0	0.074	0.153
8	298.12	16247.0	13673.0	0.085	0.194
9	297.06	16326.0	13520.0	0.077	0.168
10	297.06	15837.0	13140.0	0.080	0.207
11	297.06	16998.0	14065.0	0.074	0.227
12	297.06	16772.0	13906.0	0.076	0.315
13	297.06	19507.0	15421.0	0.053	0.437
14	297.06	17406.0	14284.0	0.070	0.774
15	297.06	14719.0	13259.0	0.149	0.157

P/N: 1331720-3-17 S/N: 109

S/b #: 748613 O.P.: 0816

139
T

TEST ENG: DATE: 11/18/99

QUALITY: 1st CPT

[2] PRINT SCREEN [3] PRINT RAW DATA [4] PRINT HISTOGRAM

RETURN [1]

[5] PRINT DISTRIBUTION GRAPH
SELECT TOUCHSCREEN BUTTON 2

Plot #1

TDS SD

Sheet (1 of 2)

CH.	3	4	5	6	7	8	9	10	11	12	13	14	15
1	0.214	0.143	0.159	0.130	0.153	0.194	0.168	0.207	0.227	0.315	0.437	0.774	0.157
2	0.233	0.163	0.124	0.143	0.148	0.183	0.167	0.201	0.241	0.308	0.434	0.738	0.111
3	0.255	0.143	0.164	0.142	0.144	0.184	0.150	0.188	0.243	0.347	0.507	0.859	0.165
4	0.248	0.177	0.181	0.142	0.154	0.184	0.167	0.232	0.231	0.360	0.437	0.859	0.136
5	0.240	0.152	0.163	0.147	0.146	0.167	0.170	0.211	0.236	0.329	0.437	0.864	0.128
TOTAL	1.190	0.778	0.791	0.704	0.745	0.912	0.822	1.039	1.178	1.659	2.252	4.094	0.697
AVERAGE	0.238	0.1556	0.1582	0.1408	0.149	0.1824	0.1644	0.2078	0.2356	0.3318	0.4504	0.8188	0.1394

A1 FUNCTIONAL TEST RESULTS 19-NOV-99

15:49:25

A1.EXE

CH	WARM TEMP	WARM COUNTS	COLD COUNTS	GAIN	DELTA T
3	298.12	16038.0	13465.0	0.085	0.233
4	298.12	16074.0	13430.0	0.082	0.163
5	298.12	17240.0	14185.0	0.071	0.124
6	297.06	16632.0	13634.0	0.072	0.143
7	297.06	16495.0	13610.0	0.075	0.148
8	298.12	16245.0	13639.0	0.084	0.183
9	297.06	16325.0	13559.0	0.078	0.167
10	297.06	15835.0	13177.0	0.082	0.201
11	297.06	16993.0	14103.0	0.075	0.241
12	297.06	16768.0	13946.0	0.077	0.308
13	297.06	19503.0	15477.0	0.054	0.434
14	297.06	17401.0	14326.0	0.071	0.738
15	297.06	14717.0	13284.0	0.151	0.111

[2] PRINT SCREEN [3] PRINT RAW DATA [4] PRINT HISTOGRAM

RETURN [1]

[5] PRINT DISTRIBUTION GRAPH
SELECT TOUCHSCREEN BUTTON 2

A1 FUNCTIONAL TEST RESULTS 19-NOV-99

15:51:33

CH	WARM TEMP	WARM COUNTS	COLD COUNTS	GAIN	DELTA T
3	298.11	16036.0	13457.0	0.085	0.255
4	298.11	16075.0	13423.0	0.082	0.143
5	298.11	17238.0	14177.0	0.071	0.164
6	297.05	16631.0	13684.0	0.074	0.142
7	297.05	16495.0	13660.0	0.077	0.144
8	298.11	16243.0	13633.0	0.084	0.184
9	297.05	16324.0	13598.0	0.080	0.150
10	297.05	15834.0	13214.0	0.083	0.188
11	297.05	16989.0	14142.0	0.076	0.243
12	297.05	16766.0	13984.0	0.078	0.347
13	297.05	19499.0	15532.0	0.055	0.507
14	297.05	17400.0	14367.0	0.072	0.859
15	297.05	14714.0	13309.0	0.154	0.165

[2] PRINT SCREEN [3] PRINT RAW DATA [4] PRINT HISTOGRAM

RETURN [1]

[5] PRINT DISTRIBUTION GRAPH
SELECT TOUCHSCREEN BUTTON 2

A1 FUNCTIONAL TEST RESULTS 19-NOV-99

15:53:01

CH	WARM TEMP	WARM COUNTS	COLD COUNTS	GAIN	DELTA T
3	298.10	16036.0	13452.0	0.084	0.248
4	298.10	16072.0	13419.0	0.082	0.177
5	298.10	17237.0	14171.0	0.071	0.181
6	297.04	16630.0	13710.0	0.074	0.142
7	297.04	16494.0	13685.0	0.077	0.154
8	298.10	16241.0	13628.0	0.083	0.184
9	297.04	16324.0	13618.0	0.080	0.167
10	297.04	15834.0	13234.0	0.083	0.232
11	297.04	16988.0	14165.0	0.077	0.231
12	297.04	16765.0	14006.0	0.079	0.360
13	297.04	19497.0	15567.0	0.055	0.437
14	297.04	17393.0	14390.0	0.072	0.859
15	297.04	14713.0	13324.0	0.156	0.136

[2] PRINT SCREEN [3] PRINT RAW DATA [4] PRINT HISTOGRAM

[5] PRINT DISTRIBUTION GRAPH
SELECT TOUCHSCREEN BUTTON 2
RETURN [1]

A1 FUNCTIONAL TEST RESULTS
19-NOV-99

15:54:05

CH	WARM TEMP	WARM COUNTS	COLD COUNTS	GAIN	DELTA T
3	298.10	16036.0	13447.0	0.084	0.240
4	298.10	16072.0	13412.0	0.082	0.152
5	298.10	17237.0	14163.0	0.071	0.163
6	297.03	16628.0	13728.0	0.075	0.147
7	297.03	16492.0	13702.0	0.078	0.146
8	298.10	16240.0	13623.0	0.083	0.167
9	297.03	16323.0	13633.0	0.081	0.170
10	297.03	15833.0	13249.0	0.084	0.211
11	297.03	16988.0	14181.0	0.077	0.236
12	297.03	16763.0	14022.0	0.079	0.329
13	297.03	19496.0	15587.0	0.056	0.437
14	297.03	17395.0	14407.0	0.073	0.864
15	297.03	14712.0	13334.0	0.157	0.128

[2] PRINT SCREEN [3] PRINT RAW DATA [4] PRINT HISTOGRAM

RETURN [1]

[5] PRINT DISTRIBUTION GRAPH
SELECT TOUCHSCREEN BUTTON 2

A1 EXE A1 FUNCTIONAL TEST RESULTS 19-NOV-99

16:00:28

CH	WARM TEMP	WARM COUNTS	COLD COUNTS	GAIN	DELTA T
3	298.03	16042.0	13520.0	0.086	0.236
4	298.03	16068.0	13479.0	0.084	0.142
5	298.03	17237.0	14253.0	0.073	0.166
6	296.95	16633.0	13731.0	0.075	0.156
7	296.95	16495.0	13703.0	0.078	0.140
8	298.03	16238.0	13680.0	0.085	0.182
9	296.95	16356.0	13656.0	0.080	0.178
10	296.95	15857.0	13267.0	0.084	0.217
11	296.95	17008.0	14194.0	0.077	0.227
12	296.95	16784.0	14032.0	0.079	0.393
13	296.95	19525.0	15598.0	0.055	0.511
14	296.95	17416.0	14417.0	0.072	0.730
15	296.95	14709.0	13328.0	0.157	0.134

P/N: 1331720-3-17 S/N: 109

S/O: 748613 OP: Q810

TEST ENG: DATE: 11/19/98

QUALITY: 1st CPT

[2] PRINT SCREEN [3] PRINT RAW DATA [4] PRINT HISTOGRAM

RETURN [1]

[5] PRINT DISTRIBUTION GRAPH
SELECT TOUCHSCREEN BUTTON 2

PLOT #2
TDS 50 SHEET (20F2)

CH.	9	10	11	12	13	14
1	0.178	0.217	0.227	0.393	0.511	0.730
2	0.169	0.222	0.253	0.364	0.449	0.838
3	0.184	0.248	0.266	0.403	0.496	0.788
4	0.163	0.228	0.279	0.346	0.510	0.827
5	0.187	0.225	0.236	0.415	0.511	0.841
TOTAL	0.881	1.140	1.261	1.921	2.477	4.024
AVERAGE	0.1762	0.228	0.2522	0.3842	0.4954	0.8048

A1 FUNCTIONAL TEST RESULTS 19-NOV-99

16:01:40

CH	WARM TEMP	WARM COUNTS	COLD COUNTS	GAIN	DELTA T
3	298.02	16042.0	13516.0	0.086	0.234
4	298.02	16066.0	13477.0	0.084	0.167
5	298.02	17235.0	14250.0	0.073	0.187
6	296.94	16633.0	13755.0	0.075	0.135
7	296.94	16495.0	13728.0	0.078	0.146
8	298.02	16239.0	13682.0	0.085	0.181
9	296.94	16350.0	13672.0	0.081	0.169
10	296.94	15853.0	13282.0	0.084	0.222
11	296.94	17004.0	14213.0	0.078	0.253
12	296.94	16780.0	14050.0	0.079	0.364
13	296.94	19518.0	15626.0	0.056	0.449
14	296.94	17411.0	14433.0	0.073	0.838
15	296.94	14709.0	13341.0	0.159	0.158

[2] PRINT SCREEN [3] PRINT RAW DATA [4] PRINT HISTOGRAM

RETURN [1]

[5] PRINT DISTRIBUTION GRAPH
SELECT TOUCHSCREEN BUTTON 2

A1 FUNCTIONAL TEST RESULTS
19-NOV-99

16:02:44

CH	WARM TEMP	WARM COUNTS	COLD COUNTS	GAIN	DELTA T
3	298.01	16042.0	13561.0	0.088	0.237
4	298.01	16066.0	13526.0	0.086	0.175
5	298.01	17235.0	14312.0	0.075	0.150
6	296.93	16632.0	13772.0	0.076	0.139
7	296.93	16495.0	13746.0	0.079	0.162
8	298.01	16238.0	13724.0	0.087	0.180
9	296.93	16345.0	13682.0	0.081	0.184
10	296.93	15849.0	13293.0	0.085	0.248
11	296.93	17001.0	14225.0	0.078	0.266
12	296.93	16778.0	14062.0	0.080	0.403
13	296.93	19515.0	15642.0	0.056	0.496
14	296.93	17407.0	14450.0	0.073	0.788
15	296.93	14709.0	13352.0	0.160	0.182

[2] PRINT SCREEN [3] PRINT RAW DATA [4] PRINT HISTOGRAM

[5] PRINT DISTRIBUTION GRAPH
SELECT TOUCHSCREEN BUTTON 2
RETURN [1]

A1 FUNCTIONAL TEST RESULTS
19-NOV-99

16:03:48

CH	WARM TEMP	WARM COUNTS	COLD COUNTS	GAIN	DELTA T
3	298.00	16041.0	13569.0	0.088	0.221
4	298.00	16065.0	13535.0	0.086	0.155
5	298.00	17234.0	14319.0	0.075	0.169
6	296.91	16632.0	13795.0	0.076	0.152
7	296.91	16496.0	13767.0	0.079	0.155
8	298.00	16238.0	13729.0	0.087	0.194
9	296.91	16343.0	13697.0	0.082	0.163
10	296.91	15847.0	13309.0	0.085	0.228
11	296.91	17001.0	14244.0	0.079	0.279
12	296.91	16777.0	14080.0	0.080	0.346
13	296.91	19514.0	15671.0	0.056	0.510
14	296.91	17406.0	14469.0	0.074	0.827
15	296.91	14710.0	13364.0	0.161	0.136

[2] PRINT SCREEN [3] PRINT RAW DATA [4] PRINT HISTOGRAM

RETURN [1]

[5] PRINT DISTRIBUTION GRAPH
SELECT TOUCHSCREEN BUTTON 2

A1 FUNCTIONAL TEST RESULTS
19-NOV-99

16:04:52

CH	WARM TEMP	WARM COUNTS	COLD COUNTS	GAIN	DELTA T
3	297.98	16041.0	13528.0	0.087	0.254
4	297.98	16064.0	13485.0	0.085	0.150
5	297.98	17233.0	14262.0	0.073	0.150
6	296.90	16632.0	13811.0	0.077	0.130
7	296.90	16495.0	13784.0	0.080	0.146
8	297.98	16235.0	13689.0	0.086	0.184
9	296.90	16340.0	13710.0	0.082	0.187
10	296.90	15846.0	13320.0	0.086	0.225
11	296.90	17000.0	14258.0	0.079	0.236
12	296.90	16776.0	14094.0	0.081	0.415
13	296.90	19513.0	15689.0	0.057	0.511
14	296.90	17406.0	14486.0	0.074	0.841
15	296.90	14710.0	13375.0	0.162	0.179

[2] PRINT SCREEN [3] PRINT RAW DATA [4] PRINT HISTOGRAM

RETURN [1]

[5] PRINT DISTRIBUTION GRAPH
SELECT TOUCHSCREEN BUTTON 2

TEST DATA SHEET 51 (Sheet 1 of 2)
Transient Susceptibility Test (Paragraph 3.2.4.2.1.4, 3.2.4.2.2.9, 3.2.4.2.3.3)

Test Setup Verified: Roger Hanel
Signature

3.2.4.2.1.4: +28V Main Bus Load-Induced Transient Test

Subpara	Step	Load Induced Transient	Functional Performance Results/Deviations	Comments/Observations
3.2.4.2.1.4.2	8	Low frequency in accordance with Figure 8	NO DEVIATIONS DETECTED	P
3.2.4.2.1.4.3	10	High frequency 1.43 Hz 200 mV p-p	NO DEVIATIONS DETECTED	P
3.2.4.2.1.4.3	10	High frequency 2.86 Hz 1.00 V p-p	NO DEVIATIONS DETECTED	P
3.2.4.2.1.4.3	10	High frequency 6.67 Hz 1.50 V p-p	NO DEVIATIONS DETECTED	P

NOTE: Attach all backup data generated during the test (photos, printouts, plots, test logs, additional comments or observations, etc.) to this data sheet.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109
11/20/99

[Signature] 11-20-99
Customer Representative Date
(Flight Hardware Only)

[Signature] 11-20-99
Test Systems Engineer Date
TA 268
Quality Control Date

TEST DATA SHEET 51 (Sheet 2 of 2)
Transient Susceptibility Test (Paragraph 3.2.4.2.1.4, 3.2.4.2.2.9, 3.2.4.2.3.3)

Test Setup Verified: Ken Shaw
Signature

3.2.4.2.2.9: +28V Pulse Load Bus Load-Induced Transient Test

Subpara	Step	Load Induced Transient	Functional Performance Results/Deviations	Comments/Observations
3.2.4.2.2.9.2	8	Low frequency in accordance with Figure 13	No Deviations Detected	PASS
3.2.4.2.2.9.3	10	High frequency 1.43 Hz 200 mV p-p	No Deviations Detected	PASS
3.2.4.2.2.9.3	10	High frequency 2.86 Hz 1.00 V p-p	No Deviations Detected	PASS
3.2.4.2.2.9.3	10	High frequency 6.67 Hz 1.50 V p-p	No Deviations Detected	PASS

3.2.4.2.3.3: +28V Analog Telemetry Bus Load-Induced Transient Test

Subpara	Step	Load Induced Transient	Functional Performance Results/Deviations	Comments/Observations
3.2.4.2.3.3.2	8	Low frequency in accordance with Figure 16	No Deviations Detected	PASS
3.2.4.2.3.3.3	10	High frequency 1.43 Hz 200 mV p-p	No Deviations Detected	PASS
3.2.4.2.3.3.3	10	High frequency 2.86 Hz 1.00 V p-p	No Deviations Detected	PASS
3.2.4.2.3.3.3	10	High frequency 6.67 Hz 1.50 V p-p	No Deviations Detected	PASS

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109

[Signature] 11-20-99
Customer Representative
(Flight Hardware Only) Date

Ken Shaw 11/20/99
Test Systems Engineer Date
[Stamp] 11-20-99
Quality Control Date

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

COMMANDS

[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]

[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]

[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]

[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL0 # 1 [18]

[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]

[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]

POWER [4] ON SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

SELECT TOUCHSCREEN BUTTON 3

PRE-LOW FREQ MLB

3.2.4.2.1.4.2

TDS-51

S/O: 748613 OP: 0810 1ST CPT

P/N: 1331720-3-II SN: 109

139
T

TEST ENG: (24)

DATE: 11/20/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	11111111	572	SCENE DATA	16503
2	SYNC SEQUENCE	11111111	574	BP	16531
3	SYNC SEQUENCE	11111111	576		16121
4	UNIT ID AND SERIAL NO	00100001	578		17612
5	DIGITAL B DATA BYTE 1	00000010	580		17333
6	DIGITAL B DATA BYTE 2	00001110	582		20176
7	DIGITAL B DATA BYTE 3	00000000	584		18210
8	DIGITAL B DATA BYTE 4	00000000	586		15015
10	REFLECTOR 1 POSITION	16225	588	REFLECTOR 1 POSITION	2597
12	REFLECTOR 2 POSITION	16225	590	REFLECTOR 2 POSITION	2418
14	REFL 1 POS	16225	592	REFL 1 POS	2600
16	REFL 2 POS	16252	594	REFL 2 POS	2419
18	SCENE DATA	16459	596	SCENE DATA	16243
20		17524	598		16461
22		16878	600		17524
24		16703	602		16884
26		16506	604		16710
28		16528	606		16504
30		16108	608		16529
32		17606	610		16100
34		17347	612		17613
36		20212	614		17336
38		18221	616		20201
40		15015	618		18219
42		167	620		15016
44	REFLECTOR 1 POSITION	16373	622	REFLECTOR 1 POSITION	2748
46	REFLECTOR 2 POSITION	16373	624	REFLECTOR 2 POSITION	2567
48	REFL 1 POS	16375	626	REFL 1 POS	2753
50	REFL 2 POS	16375	628	REFL 2 POS	2571
52	SCENE DATA	16261	630	SCENE DATA	16233
54		16454	632		16453
56		17517	634		17517
58		16882	636		16881
60		16706	638		16705
62		16498	640		16492
64		16527	642		16529
66		16105	644		16104
68		17612	646		17615
70		17352	648		17343
72		20170	650		20180
74		18204	652		18211
76		15014	654		15013
78	REFLECTOR 1 POSITION	324	656	REFLECTOR 1 POSITION	2899
80	REFLECTOR 2 POSITION	143	658	REFLECTOR 2 POSITION	2718
82	REFL 1 POS	326	660	REFL 1 POS	2905
84	REFL 2 POS	149	662	REFL 2 POS	2722
86	SCENE DATA	16238	664	SCENE DATA	16243
88		16454	666		16454
90		17516	668		17516
92		16879	670		16882

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16701	672	REFLECTOR 1 POSITION 4	16703
96	CH 8	16497	674	REFLECTOR 2 POSITION 4	16495
98	CH 9	16527	676	REFL 1 POS 4 2ND LOOK	16529
100	CH 10	16105	678	REFL 2 POS 4 2ND LOOK	16101
102	CH 11	17610	680	SCENE DATA BP 4	17611
104	CH 12	17335	682		17330
106	CH 13	20185	684		20189
108	CH 14	18202	686		18206
110	CH 15	15013	688		15013
112	REFLECTOR 1 POSITION 4	474	690	REFLECTOR 1 POSITION 21	3052
114	REFLECTOR 2 POSITION 4	297	692	REFLECTOR 2 POSITION 21	2869
116	REFL 1 POS 4 2ND LOOK	479	694	REFL 1 POS 21 2ND LOOK	3056
118	REFL 2 POS 4 2ND LOOK	300	696	REFL 2 POS 21 2ND LOOK	2874
120	SCENE DATA BP 4	16243	698	SCENE DATA BP 21	16244
122	CH 3	16453	700	CH 3	16451
124	CH 4	17515	702	CH 4	17515
126	CH 5	16884	704	CH 5	16878
128	CH 6	16700	706	CH 6	16703
130	CH 7	16497	708	CH 7	16496
132	CH 8	16532	710	CH 8	16531
134	CH 9	16112	712	CH 9	16107
136	CH 10	17617	714	CH 10	17615
138	CH 11	17333	716	CH 11	17337
140	CH 12	20193	718	CH 12	20183
142	CH 13	18206	720	CH 13	18206
144	CH 14	15015	722	CH 14	15012
146	CH 15	626	724	CH 15	3201
148	REFLECTOR 1 POSITION 5	444	726	REFLECTOR 1 POSITION 22	3022
150	REFLECTOR 2 POSITION 5	632	728	REFLECTOR 2 POSITION 22	3205
152	REFL 1 POS 5 2ND LOOK	449	730	REFL 1 POS 22 2ND LOOK	3028
154	REFL 2 POS 5 2ND LOOK	16234	732	REFL 2 POS 22 2ND LOOK	16238
156	SCENE DATA BP 5	16454	734	SCENE DATA BP 22	16452
158	CH 3	17515	736	CH 3	17517
160	CH 4	16881	738	CH 4	16883
162	CH 5	16705	740	CH 5	16701
164	CH 6	16494	742	CH 6	16498
166	CH 7	16531	744	CH 7	16529
168	CH 8	16118	746	CH 8	16108
170	CH 9	17601	748	CH 9	17611
172	CH 10	17333	750	CH 10	17344
174	CH 11	20186	752	CH 11	20198
176	CH 12	18211	754	CH 12	18216
178	CH 13	15015	756	CH 13	15013
180	CH 14	778	758	CH 14	3351
182	CH 15	596	760	REFLECTOR 1 POSITION 23	3173
184	REFLECTOR 1 POSITION 6	781	762	REFLECTOR 2 POSITION 23	3357
186	REFL 1 POS 6 2ND LOOK	598	764	REFL 1 POS 23 2ND LOOK	3178
188	REFL 2 POS 6 2ND LOOK	16239	766	REFL 2 POS 23 2ND LOOK	16246
190	SCENE DATA BP 6	16454	768	SCENE DATA BP 23	16453
192	CH 3	17517	770	CH 3	17523
	CH 4			CH 4	
	CH 5			CH 5	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16884	772	CH 6	16877
196	CH 7	16704	774	CH 7	16705
198	CH 8	16494	776	CH 8	16497
200	CH 9	16529	778	CH 9	16531
202	CH 10	16097	780	CH 10	16107
204	CH 11	17614	782	CH 11	17609
206	CH 12	17337	784	CH 12	17343
208	CH 13	20197	786	CH 13	20185
210	CH 14	18192	788	CH 14	18233
212	CH 15	15018	790	CH 15	15013
214	REFLECTOR 1 POSITION 7	928	792	REFLECTOR 1 POSITION 24	3505
216	REFLECTOR 2 POSITION 7	749	794	REFLECTOR 2 POSITION 24	3325
218	REFL 1 POS 7	933	796	REFL 1 POS 24	3508
220	REFL 2 POS 7	748	798	REFL 2 POS 24	3330
222	SCENE DATA BP 7	16247	800	SCENE DATA BP 24	16247
224	CH 4	16456	802	CH 4	16455
226	CH 5	17518	804	CH 5	17515
228	CH 6	16880	806	CH 6	16882
230	CH 7	16705	808	CH 7	16703
232	CH 8	16496	810	CH 8	16495
234	CH 9	16529	812	CH 9	16527
236	CH 10	16102	814	CH 10	16108
238	CH 11	17613	816	CH 11	17611
240	CH 12	17343	818	CH 12	17339
242	CH 13	20187	820	CH 13	20187
244	CH 14	18215	822	CH 14	18214
246	CH 15	15013	824	CH 15	15012
248	REFLECTOR 1 POSITION 8	1080	826	REFLECTOR 1 POSITION 25	3653
250	REFLECTOR 2 POSITION 8	900	828	REFLECTOR 2 POSITION 25	3477
252	REFL 1 POS 8	1084	830	REFL 1 POS 25	3659
254	REFL 2 POS 8	903	832	REFL 2 POS 25	3480
256	SCENE DATA BP 8	16237	834	SCENE DATA BP 25	16234
258	CH 4	16457	836	CH 4	16450
260	CH 5	17519	838	CH 5	17519
262	CH 6	16879	840	CH 6	16879
264	CH 7	16704	842	CH 7	16704
266	CH 8	16495	844	CH 8	16500
268	CH 9	16529	846	CH 9	16530
270	CH 10	16104	848	CH 10	16109
272	CH 11	17617	850	CH 11	17613
274	CH 12	17335	852	CH 12	17341
276	CH 13	20189	854	CH 13	20176
278	CH 14	18200	856	CH 14	18185
280	CH 15	15014	858	CH 15	15014
282	REFLECTOR 1 POSITION 9	1233	860	REFLECTOR 1 POSITION 26	3806
284	REFLECTOR 2 POSITION 9	1053	862	REFLECTOR 2 POSITION 26	3627
286	REFL 1 POS 9	1236	864	REFL 1 POS 26	3812
288	REFL 2 POS 9	1055	866	REFL 2 POS 26	3633
290	SCENE DATA BP 9	16238	868	SCENE DATA BP 26	16255
292	CH 3	16451	870	CH 3	16458

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17521	872	REFLECTOR 1 POSITION 27	3971
296	CH 6	16880	874	REFLECTOR 2 POSITION 27	3781
298	CH 7	16705	876	REFL 1 POS 27 2ND LOOK	3971
300	CH 8	16495	878	REFL 2 POS 27 2ND LOOK	3785
302	CH 9	16527	880	SCENE DATA BP 27	16222
304	CH 10	16106	882	CH 3	16455
306	CH 11	17610	884	CH 4	17515
308	CH 12	17342	886	CH 5	16881
310	CH 13	20197	888	CH 6	16704
312	CH 14	18235	890	CH 7	16497
314	CH 15	15014	892	CH 8	16531
316	REFLECTOR 1 POSITION 10	1385	894	CH 9	16105
318	REFLECTOR 2 POSITION 10	1206	896	CH 10	17612
320	REFL 1 POS 10 2ND LOOK	1388	898	CH 11	17332
322	REFL 2 POS 10 2ND LOOK	1205	900	CH 12	20193
324	SCENE DATA BP 10	16247	902	CH 13	18219
326	CH 3	16454	904	CH 14	15012
328	CH 4	17519	906	CH 15	4109
330	CH 5	16882	908	REFLECTOR 1 POSITION 28	3938
332	CH 6	16703	910	REFLECTOR 2 POSITION 28	4114
334	CH 7	16501	912	REFL 1 POS 28 2ND LOOK	3936
336	CH 8	16525	914	REFL 2 POS 28 2ND LOOK	16216
338	CH 9	16105	916	SCENE DATA BP 28	16447
340	CH 10	17617	918	CH 3	17517
342	CH 11	17343	920	CH 4	16877
344	CH 12	20184	922	CH 5	16702
346	CH 13	18200	924	CH 6	16494
348	CH 14	15013	926	CH 7	16527
350	CH 15	1534	928	CH 8	16107
352	REFLECTOR 1 POSITION 11	1357	930	CH 9	17333
354	REFL 1 POS 11 2ND LOOK	1540	932	CH 10	20192
356	REFL 2 POS 11 2ND LOOK	1357	934	CH 11	15012
358	SCENE DATA BP 11	16219	936	CH 12	4260
360	CH 3	16455	938	CH 13	4084
362	CH 4	17519	940	CH 14	4267
364	CH 5	16878	942	CH 15	4088
366	CH 6	16702	944	REFLECTOR 1 POSITION 29	16176
368	CH 7	16501	946	REFLECTOR 2 POSITION 29	17333
370	CH 8	16530	948	REFL 1 POS 29 2ND LOOK	20192
372	CH 9	16112	950	REFL 2 POS 29 2ND LOOK	15012
374	CH 10	17612	952	SCENE DATA BP 29	4260
376	CH 11	17334	954	CH 3	4084
378	CH 12	20183	956	CH 4	4267
380	CH 13	18200	958	CH 5	4088
382	CH 14	15015	960	CH 6	16176
384	CH 15	1687	962	CH 7	17333
386	REFLECTOR 1 POSITION 12	1508	964	CH 8	20192
388	REFLECTOR 2 POSITION 12	1691	966	CH 9	15012
390	REFL 1 POS 12 2ND LOOK	1509	968	CH 10	4260
392	REFL 2 POS 12 2ND LOOK	16248	970	CH 11	4084
	SCENE DATA BP 12			CH 12	4267
	CH 3			CH 13	4088
	CH 4			CH 14	16176
	CH 5			CH 15	17333
	REFLECTOR 1 POSITION 29			CH 1	20192
	REFLECTOR 2 POSITION 29			CH 2	15012
	REFL 1 POS 29 2ND LOOK			CH 3	4260
	REFL 2 POS 29 2ND LOOK			CH 4	4084
	SCENE DATA BP 29			CH 5	4267
	CH 3			CH 6	4088
	CH 4			CH 7	16176
	CH 5			CH 8	17333
	CH 6			CH 9	20192
	CH 7			CH 10	15012
	CH 8			CH 11	4260
	CH 9			CH 12	4084
	CH 10			CH 13	4267
	CH 11			CH 14	4088
	CH 12			CH 15	16176
	CH 13			CH 1	17333
	CH 14			CH 2	20192
	CH 15			CH 3	15012
	REFLECTOR 1 POSITION 29			CH 4	4260
	REFLECTOR 2 POSITION 29			CH 5	4084
	REFL 1 POS 29 2ND LOOK			CH 6	4267
	REFL 2 POS 29 2ND LOOK			CH 7	4088
	SCENE DATA BP 29			CH 8	16176
	CH 3			CH 9	17333
	CH 4			CH 10	20192
	CH 5			CH 11	15012
	CH 6			CH 12	4260
	CH 7			CH 13	4084
	CH 8			CH 14	4267
	CH 9			CH 15	4088
	CH 10			CH 1	16176
	CH 11			CH 2	17333
	CH 12			CH 3	20192
	CH 13			CH 4	15012
	CH 14			CH 5	4260
	CH 15			CH 6	4084
	REFLECTOR 1 POSITION 29			CH 7	4267
	REFLECTOR 2 POSITION 29			CH 8	4088
	REFL 1 POS 29 2ND LOOK			CH 9	16176
	REFL 2 POS 29 2ND LOOK			CH 10	17333
	SCENE DATA BP 29			CH 11	20192
	CH 3			CH 12	15012
	CH 4			CH 13	4260
	CH 5			CH 14	4084
	CH 6			CH 15	4267
	CH 7			CH 1	4088
	CH 8			CH 2	16176
	CH 9			CH 3	17333
	CH 10			CH 4	20192
	CH 11			CH 5	15012
	CH 12			CH 6	4260
	CH 13			CH 7	4084
	CH 14			CH 8	4267
	CH 15			CH 9	4088
	REFLECTOR 1 POSITION 29			CH 10	16176
	REFLECTOR 2 POSITION 29			CH 11	17333
	REFL 1 POS 29 2ND LOOK			CH 12	20192
	REFL 2 POS 29 2ND LOOK			CH 13	15012
	SCENE DATA BP 29			CH 14	4260
	CH 3			CH 15	4084
	CH 4			CH 1	4267
	CH 5			CH 2	4088
	CH 6			CH 3	16176
	CH 7			CH 4	17333
	CH 8			CH 5	20192
	CH 9			CH 6	15012
	CH 10			CH 7	4260
	CH 11			CH 8	4084
	CH 12			CH 9	4267
	CH 13			CH 10	4088
	CH 14			CH 11	16176
	CH 15			CH 12	17333
	REFLECTOR 1 POSITION 29			CH 13	20192
	REFLECTOR 2 POSITION 29			CH 14	15012
	REFL 1 POS 29 2ND LOOK			CH 15	4260
	REFL 2 POS 29 2ND LOOK			CH 1	4084
	SCENE DATA BP 29			CH 2	4267
	CH 3			CH 3	4088
	CH 4			CH 4	16176
	CH 5			CH 5	17333
	CH 6			CH 6	20192
	CH 7			CH 7	15012
	CH 8			CH 8	4260
	CH 9			CH 9	4084
	CH 10			CH 10	4267
	CH 11			CH 11	4088
	CH 12			CH 12	16176
	CH 13			CH 13	17333
	CH 14			CH 14	20192
	CH 15			CH 15	15012
	REFLECTOR 1 POSITION 29			CH 1	4260
	REFLECTOR 2 POSITION 29			CH 2	4084
	REFL 1 POS 29 2ND LOOK			CH 3	4267
	REFL 2 POS 29 2ND LOOK			CH 4	4088
	SCENE DATA BP 29			CH 5	16176
	CH 3			CH 6	17333
	CH 4			CH 7	20192
	CH 5			CH 8	15012
	CH 6			CH 9	4260
	CH 7			CH 10	4084
	CH 8			CH 11	4267
	CH 9			CH 12	4088
	CH 10			CH 13	16176
	CH 11			CH 14	17333
	CH 12			CH 15	20192
	CH 13			CH 1	15012
	CH 14			CH 2	4260
	CH 15			CH 3	4084
	REFLECTOR 1 POSITION 29			CH 4	4267
	REFLECTOR 2 POSITION 29			CH 5	4088
	REFL 1 POS 29 2ND LOOK			CH 6	16176
	REFL 2 POS 29 2ND LOOK			CH 7	17333
	SCENE DATA BP 29			CH 8	20192
	CH 3			CH 9	15012
	CH 4			CH 10	4260
	CH 5			CH 11	4084
	CH 6			CH 12	4267
	CH 7			CH 13	4088
	CH 8			CH 14	16176
	CH 9			CH 15	17333
	CH 10			CH 1	20192
	CH 11			CH 2	15012
	CH 12			CH 3	4260
	CH 13			CH 4	4084
	CH 14			CH 5	4267
	CH 15			CH 6	4088
	REFLECTOR 1 POSITION 29			CH 7	16176
	REFLECTOR 2 POSITION 29			CH 8	17333
	REFL 1 POS 29 2ND LOOK			CH 9	20192
	REFL 2 POS 29 2ND LOOK			CH 10	15012
	SCENE DATA BP 29			CH 11	4260
	CH 3			CH 12	4084
	CH 4			CH 13	4267
	CH 5			CH 14	4088
	CH 6			CH 15	16176
	CH 7			CH 1	17333
	CH 8			CH 2	20192
	CH 9			CH 3	15012
	CH 10			CH 4	4260
	CH 11			CH 5	4084
	CH 12			CH 6	4267
	CH 13			CH 7	4088
	CH 14			CH 8	16176
	CH 15			CH 9	17333
	REFLECTOR 1 POSITION 29			CH 10	20192
	REFLECTOR 2 POSITION 29			CH 11	15012
	REFL 1 POS 29 2ND LOOK			CH 12	4260
	REFL 2 POS 29 2ND LOOK			CH 13	4084
	SCENE DATA BP 29			CH 14	4267
	CH 3			CH 15	4088
	CH 4			CH 1	16176
	CH 5			CH 2	17333
	CH 6			CH 3	20192
	CH 7			CH 4	15012
	CH 8			CH 5	4260
	CH 9			CH 6	4084
	CH 10			CH 7	4267
	CH 11			CH 8	4088
	CH 12			CH 9	16176
	CH 13			CH 10	17333
	CH 14			CH 11	20192
	CH 15			CH 12	15012
	REFLECTOR 1 POSITION 29			CH 13	4260
	REFLECTOR 2 POSITION 29			CH 14	4084
	REFL 1 POS 29 2ND LOOK			CH 15	4267
	REFL 2 POS 29 2ND LOOK			CH 1	4088
	SCENE DATA BP 29			CH 2	16176
	CH 3			CH 3	17333
	CH 4			CH 4	20192
	CH 5			CH 5	15012
	CH 6			CH 6	4260
	CH 7			CH 7	4084
	CH 8			CH 8	4267
	CH 9			CH 9	4088
	CH 10			CH 10	16176
	CH 11			CH 11	17333
	CH 12			CH 12	20192
	CH 13			CH 13	15012
	CH 14			CH 14	4260
	CH 15			CH 15	4084
	REFLECTOR 1 POSITION 29			CH 1	4267
	REFLECTOR 2 POSITION 29			CH 2	4088
	REFL 1 POS 29 2ND LOOK			CH 3	16176
	REFL 2 POS 29 2ND LOOK			CH 4	17333
	SCENE DATA BP 29			CH 5	20192
	CH 3			CH 6	15012
	CH 4			CH 7	4260
	CH 5			CH 8	4084
	CH 6			CH 9	4267
	CH 7			CH 10	4088
	CH 8			CH 11	16176
	CH 9			CH 12	17333
	CH 10			CH 13	20192
	CH 11			CH 14	15012

FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16458	972	CH 4	16449
396	CH 5	17514	974	CH 5	17518
398	CH 6	16882	976	CH 6	16879
400	CH 7	16701	978	CH 7	16707
402	CH 8	16495	980	CH 8	16513
404	CH 9	16528	982	CH 9	16527
406	CH 10	16109	984	CH 10	16104
408	CH 11	17622	986	CH 11	17615
410	CH 12	17350	988	CH 12	17338
412	CH 13	20191	990	CH 13	20188
414	CH 14	18219	992	CH 14	18195
416	CH 15	15013	994	CH 15	15012
418	REFLECTOR 1 POSITION 13	1840	996	REFLECTOR 1 POSITION 30	4419
420	REFLECTOR 2 POSITION 13	1658	998	REFLECTOR 2 POSITION 30	4236
422	REFL 1 POS 13 2ND LOOK	1843	1000	REFL 1 POS 30 2ND LOOK	4421
424	REFL 2 POS 13 2ND LOOK	1661	1002	REFL 2 POS 30 2ND LOOK	4240
426	SCENE DATA BP 13	16217	1004	SCENE DATA BP 30	16266
428	CH 3	16453	1006	CH 3	16459
430	CH 4	17517	1008	CH 4	17518
432	CH 5	16883	1010	CH 5	16882
434	CH 6	16706	1012	CH 6	16701
436	CH 7	16499	1014	CH 7	16497
438	CH 8	16533	1016	CH 8	16530
440	CH 9	16099	1018	CH 9	16106
442	CH 10	17616	1020	CH 10	17612
444	CH 11	17346	1022	CH 11	17336
446	CH 12	20203	1024	CH 12	20204
448	CH 13	18218	1026	CH 13	18227
450	CH 14	15017	1028	CH 14	15012
452	CH 15	1990	1030	CH 15	6017
454	REFLECTOR 1 POSITION 14	1808	1032	REFLECTOR 1 COLD CAL POS	5834
456	REFLECTOR 2 POSITION 14	1994	1034	REFLECTOR 2 COLD CAL POS	6017
458	REFL 1 POS 14 2ND LOOK	1812	1036	REFL 1 COLD CAL 2ND LOOK	5833
460	REFL 2 POS 14 2ND LOOK	16227	1038	REFL 2 COLD CAL 2ND LOOK	16265
462	SCENE DATA BP 14	16458	1040	COLD CAL DATA 1	16456
464	CH 3	17517	1042	CH 3	17519
466	CH 4	16881	1044	CH 4	16880
468	CH 5	16710	1046	CH 5	16706
470	CH 6	16489	1048	CH 6	16500
472	CH 7	16528	1050	CH 7	16527
474	CH 8	16117	1052	CH 8	16107
476	CH 9	17614	1054	CH 9	17612
478	CH 10	17336	1056	CH 10	17340
480	CH 11	20176	1058	CH 11	20192
482	CH 12	18173	1060	CH 12	18188
484	CH 13	15015	1062	CH 13	15012
486	CH 14	2143	1064	CH 14	16264
488	CH 15	1964	1066	CH 15	16453
490	REFLECTOR 1 POSITION 15	2146	1068	REFLECTOR 1 COLD CAL POS	17519
492	REFLECTOR 2 POSITION 15	1964	1070	REFLECTOR 2 COLD CAL POS	16876
	REFL 1 POS 15 2ND LOOK			REFL 1 COLD CAL 2ND LOOK	
	REFL 2 POS 15 2ND LOOK			REFL 2 COLD CAL 2ND LOOK	
				COLD CAL DATA 1	
				COLD CAL DATA 2	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	162556	1072		16705
496		164559	1074		16500
498		175224	1076		16529
500		168883	1078		16108
502		167112	1080		17614
504		16502	1082		17341
506		16528	1084		20181
508		161113	1086		18214
510		176113	1088		15012
512		173332	1182	REFLECTOR 1 WARM CAL POS	10416
514		20190	1184	REFLECTOR 2 WARM CAL POS	10232
516		18210	1186	REFL 1 WARM CAL 2ND LOOK	10415
518		15015	1188	REFL 2 WARM CAL 2ND LOOK	10233
520	REFLECTOR 1 POSITION 16	22293	1190	WARM CAL DATA 1	162227
522	REFLECTOR 2 POSITION 16	21115	1192		16451
524	REFL 1 POS 16 2ND LOOK	22198	1194		17511
526	REFL 2 POS 16 2ND LOOK	2115	1196		16871
528	SCENE DATA BP 16	16282	1198		16700
530		16467	1200		16492
532		175223	1202		16522
534		16882	1204		16102
536		16705	1206		17602
540		16493	1208		17328
542		16529	1210		20178
544		16108	1212		18208
546		17621	1214		15009
548		17341	1216		16224
550		20169	1218		16452
552		18197	1220		17510
554		15014	1222		16874
556	REFLECTOR 1 POSITION 17	2444	1224		16699
558	REFLECTOR 2 POSITION 17	2263	1226		16491
560	REFL 1 POS 17 2ND LOOK	2449	1228		16525
562	REFL 2 POS 17 2ND LOOK	2265	1230		16100
564	SCENE DATA BP 17	16243	1232		17604
566		16457	1234		17332
568		17525	1236		20171
570		16883	1238		18192
		16707	1240		15009
				WARM CAL DATA 2	

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
1090	SCAN MOTOR A1-1	17244	22.15	
1092	SCAN MOTOR A1-2	17782	22.00	
1094	FEEDHORN A1-1	17573	22.21	
1096	FEEDHORN A1-2	17628	22.38	
1098	RF MUX A1-1	18132	22.84	
1100	RF MUX A1-2	18151	22.93	
1102	LOCAL OSCILLATOR CHANNEL 3	19182	24.79	
1104	LOCAL OSCILLATOR CHANNEL 4	19167	24.46	
1106	LOCAL OSCILLATOR CHANNEL 5	18975	24.60	
1108	LOCAL OSCILLATOR CHANNEL 6	18531	23.94	
1110	LOCAL OSCILLATOR CHANNEL 7	18518	23.72	
1112	LOCAL OSCILLATOR CHANNEL 8	18413	24.41	
1114	LOCAL OSCILLATOR CHANNEL 15	19293	24.67	
1116	PLL LO #2 CHANNELS 9 THROUGH 14	17705	22.07	
1118	PLL LO #1 CHANNELS 9 THROUGH 14	20098	26.59	
1120	SPARE (NOT USED)	32767	51.27	
1122	MIXER/IF AMPLIFIER CHANNEL 3	18795	23.25	
1124	MIXER/IF AMPLIFIER CHANNEL 4	18790	23.43	
1126	MIXER/IF AMPLIFIER CHANNEL 5	18558	23.37	
1128	MIXER/IF AMPLIFIER CHANNEL 6	18329	23.29	
1130	MIXER/IF AMPLIFIER CHANNEL 7	18209	23.31	
1132	MIXER/IF AMPLIFIER CHANNEL 8	18606	23.41	
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	18323	22.78	
1136	MIXER/IF AMPLIFIER CHANNEL 15	18860	24.76	
1138	IF AMPLIFIER CHANNEL 11 THRU 14	18725	24.08	
1140	IF AMPLIFIER CHANNEL 9	18728	24.14	
1142	IF AMPLIFIER CHANNEL 10	18887	24.15	
1144	IF AMPLIFIER CHANNEL 11	18096	22.96	
1146	DC/DC CONVERTER	19487	25.52	
1148	IF AMPLIFIER CHANNEL 13	18145	23.01	
1150	IF AMPLIFIER CHANNEL 14	18265	23.34	
1152	IF AMPLIFIER CHANNEL 12	18026	22.90	
1154	RF SHELF A1-1	17876	23.46	
1156	RF SHELF A1-2	18150	23.15	
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	17574	22.28	
1160	A1-1 WARM LOAD 1	22753	21.87	
1162	A1-1 WARM LOAD 2	22517	21.84	
1164	A1-1 WARM LOAD 3	22737	21.90	
1166	A1-1 WARM LOAD 4	22679	21.86	
1168	A1-1 WARM LOAD CENTER	22760	22.00	
1170	A1-2 WARM LOAD 1	22550	21.90	
1172	A1-2 WARM LOAD 2	22694	21.81	
1174	A1-2 WARM LOAD 3	22849	21.92	
1176	A1-2 WARM LOAD 4	22628	21.94	
1178	A1-2 WARM LOAD CENTER	22544	21.89	
1180	TEMP SENSOR REFERENCE VOLTAGE	25317		

DESCRIPTION

STATUS

STATUS

STATUS

SCANNER A1-1 POWER	ON		ON
SCANNER A1-2 POWER	ON		ON
PLL POWER	PLLO # 1	PLLO # 1	PLLO # 1
ANTENNA IN WARM CAL POSITION MODE	NO	NO	NO
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO
ANTENNA IN NADIR POSITION MODE	NO	NO	NO
ANTENNA IN FULL SCAN MODE	YES	YES	YES
SURVIVAL HEATER POWER	OFF	OFF	OFF
MODULE POWER	CONNECT	CONNECT	CONNECT
COLD CAL POSITION MSB	ZERO	ZERO	ZERO
COLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA

DESCRIPTION

VALUE

DEG C

VALUE

DEG C

VALUE

DEG C

A1-1 SCANNER MOTOR TEMPERATURE	213	16.6	213	16.6	213	16.6
A1-2 SCANNER MOTOR TEMPERATURE	213	16.6	213	16.6	213	16.6
A1-1 RF SHELF TEMPERATURE	214	18.0	214	18.0	214	18.0
A1-2 RF SHELF TEMPERATURE	212	15.3	212	15.3	213	16.6
A1-1 WARM LOAD TEMPERATURE	213	16.6	213	16.6	213	16.6

DESCRIPTION

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	88	41.01	88	41.01	87	40.54
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	84	39.14	84	39.14	84	39.14
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	171	14.76	171	14.76	170	14.67
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	157	-15.15	148	-15.15	147	-15.20
RECEIVER AMPLIFIER +8 VDC	145	7.85	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	146	4.87	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	146	4.87	146	4.87	145	4.83
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76	169	9.76
PHASE LOCK LOOP (CHANNEL 9/14)	169	14.58	169	14.58	169	14.58
PHASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30	145	-15.30
L.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 3)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78	171	9.78
PLLO # 2 LOCK DETECT	1	0.02	1	0.02	1	0.02
PLLO # 1 LOCK DETECT	220	4.40	220	4.40	220	4.40
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

AMSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 08:16:47 SCAN NUMBER 156
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

COMMANDS
[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL0 # 1 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 3

POST - LOW FREQ MLD

3.2.4.2.1.4.2

TDS 51

S/O: 748613 OA: 0810 1ST CPT
P/N: 137 20-3-II SN: 109

$\frac{139}{1}$

TEST ENG: ~~27~~

2.11/20/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	11111111	572	SCENE DATA	16452
2	SYNC SEQUENCE	11111111	574	BP	16498
3	SYNC SEQUENCE	11111111	576		16082
4	UNIT ID AND SERIAL NO	00100001	578		17534
5	DIGITAL B DATA	00000010	580		17268
6	DIGITAL B DATA	00001110	582		20094
7	DIGITAL B DATA	00000000	584		18102
8	DIGITAL B DATA	00000000	586		14961
10	REFLECTOR 1 POSITION	16225	588	REFLECTOR 1 POSITION	2598
12	REFLECTOR 2 POSITION	16225	590	REFLECTOR 2 POSITION	2417
14	REFL 1 POS	16225	592	REFL 1 POS	2601
16	REFL 2 POS	16235	594	REFL 2 POS	2419
18	SCENE DATA	16389	596	SCENE DATA	16217
20	BP	17473	598	BP	16387
22	CH	16834	600	CH	17476
24	CH	16663	602	CH	16842
26	CH	16455	604	CH	16675
28	CH	16492	606	CH	16456
30	CH	16057	608	CH	16494
32	CH	17525	610	CH	16056
34	CH	17263	612	CH	17531
36	CH	20082	614	CH	17261
38	CH	18092	616	CH	20083
40	CH	14955	618	CH	18081
42	CH	166	620	CH	14961
44	REFLECTOR 1 POSITION	16373	622	REFLECTOR 1 POSITION	2748
46	REFLECTOR 2 POSITION	16373	624	REFLECTOR 2 POSITION	2567
48	REFL 1 POS	16375	626	REFL 1 POS	2753
50	REFL 2 POS	16243	628	REFL 2 POS	2570
52	SCENE DATA	16243	630	SCENE DATA	16214
54	BP	16385	632	BP	16377
56	CH	17469	634	CH	17467
58	CH	16830	636	CH	16834
60	CH	16667	638	CH	16665
62	CH	16449	640	CH	16441
64	CH	16493	642	CH	16489
66	CH	16061	644	CH	16060
68	CH	17528	646	CH	17529
70	CH	17261	648	CH	17259
72	CH	20104	650	CH	20087
74	CH	18096	652	CH	18085
76	CH	14955	654	CH	14956
78	REFLECTOR 1 POSITION	323	656	REFLECTOR 1 POSITION	2899
80	REFLECTOR 2 POSITION	144	658	REFLECTOR 2 POSITION	2717
82	REFL 1 POS	326	660	REFL 1 POS	2904
84	REFL 2 POS	148	662	REFL 2 POS	2722
86	SCENE DATA	16213	664	SCENE DATA	16217
88	BP	16376	666	BP	16381
90	CH	17468	668	CH	17464
92	CH	16834	670	CH	16831

AMSU A1_33 A1.EXE		DIGITAL A DATA		20-NOV-99		08:16:51		PAGE		2	
ELEMENT		DESCRIPTION		VALUE		ELEMENT		DESCRIPTION		VALUE	
94	CH	REFLECTOR 1 POSITION	4	16668	672	7	CH	REFLECTOR 1 POSITION	21	16667	7
96	CH	REFLECTOR 2 POSITION	4	16441	674	8	CH	REFLECTOR 2 POSITION	21	16444	8
98	CH	REFL 1 POS	4	16489	676	9	CH	REFL 1 POS	21	16491	9
100	CH	REFL 2 POS	4	16066	678	10	CH	REFL 2 POS	21	16055	10
102	CH	SCENE DATA	BP	17524	680	11	CH	SCENE DATA	BP	17524	11
104	CH			17263	682	12	CH			17265	12
106	CH			20088	684	13	CH			20100	13
108	CH			18114	686	14	CH			18095	14
110	CH			14957	688	15	CH			14956	15
112	CH	REFLECTOR 1 POSITION	4	474	690			REFLECTOR 1 POSITION	21	3052	
114	CH	REFLECTOR 2 POSITION	4	297	692			REFLECTOR 2 POSITION	21	2870	
116	CH	REFL 1 POS	4	478	694			REFL 1 POS	21	3056	
118	CH	REFL 2 POS	4	299	696			REFL 2 POS	21	2874	
120	CH	SCENE DATA	BP	16217	698			SCENE DATA	BP	16219	
122	CH			16381	700	3	CH			16381	3
124	CH			17466	702	4	CH			17465	4
126	CH			16836	704	5	CH			16833	5
128	CH			16669	706	6	CH			16664	6
130	CH			16444	708	7	CH			16441	7
132	CH			16495	710	8	CH			16493	8
134	CH			16069	712	9	CH			16062	9
136	CH			17530	714	10	CH			17529	10
138	CH			17257	716	11	CH			17258	11
140	CH			20082	718	12	CH			20089	12
142	CH			18079	720	13	CH			18102	13
144	CH			14959	722	14	CH			14955	14
146	CH	REFLECTOR 1 POSITION	5	624	724	15	CH	REFLECTOR 1 POSITION	22	3202	15
148	CH	REFLECTOR 2 POSITION	5	446	726			REFLECTOR 2 POSITION	22	3203	
150	CH	REFL 1 POS	5	632	728			REFL 1 POS	22	3206	
152	CH	REFL 2 POS	5	448	730			REFL 2 POS	22	3208	
154	CH	SCENE DATA	BP	16211	732			SCENE DATA	BP	16214	
156	CH			16379	734	3	CH			16381	3
158	CH			17462	736	4	CH			17467	4
160	CH			16836	738	5	CH			16832	5
162	CH			16670	740	6	CH			16664	6
164	CH			16439	742	7	CH			16442	7
166	CH			16490	744	8	CH			16487	8
168	CH			16075	746	9	CH			16059	9
170	CH			17521	748	10	CH			17527	10
172	CH			20085	750	11	CH			20091	11
174	CH			18114	752	12	CH			18112	12
176	CH			14959	754	13	CH			14956	13
178	CH	REFLECTOR 1 POSITION	6	776	756	14	CH	REFLECTOR 1 POSITION	23	3350	14
180	CH	REFLECTOR 2 POSITION	6	597	758	15	CH	REFLECTOR 2 POSITION	23	3350	15
182	CH	REFL 1 POS	6	781	760			REFL 1 POS	23	3357	
184	CH	REFL 2 POS	6	598	762			REFL 2 POS	23	3357	
186	CH	SCENE DATA	BP	16215	764			SCENE DATA	BP	16213	
188	CH			16379	766	3	CH			16379	3
190	CH			17461	768	4	CH			17466	4
192	CH				770	5	CH				5

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16839	772	REFLECTOR 1 POSITION 24	3504
196	CH 7	16671	774	REFLECTOR 2 POSITION 24	3325
198	CH 8	16443	776	REFL 1 POS 24 2ND LOOK	3508
200	CH 9	16497	778	REFL 2 POS 24 2ND LOOK	3331
202	CH 10	16054	780	SCENE DATA BP 24	16209
204	CH 11	17527	782	CH 3	16379
206	CH 12	17258	784	CH 4	17467
208	CH 13	20081	786	CH 5	16830
210	CH 14	18086	788	CH 6	16666
212	CH 15	14964	790	CH 7	16442
214	REFLECTOR 1 POSITION 7	929	792	CH 8	16488
216	REFLECTOR 2 POSITION 7	749	794	CH 9	16060
218	REFL 1 POS 7 2ND LOOK	933	796	CH 10	17526
220	REFL 2 POS 7 2ND LOOK	748	798	CH 11	17261
222	SCENE DATA BP 7	16223	800	CH 12	20092
224	CH 3	16378	802	CH 13	18106
226	CH 4	17463	804	CH 14	14957
228	CH 5	16832	806	CH 15	3654
230	CH 6	16664	808	REFLECTOR 1 POSITION 25	3476
232	CH 7	16442	810	REFLECTOR 2 POSITION 25	3659
234	CH 8	16492	812	REFL 1 POS 25 2ND LOOK	3480
236	CH 9	16056	814	REFL 2 POS 25 2ND LOOK	16206
238	CH 10	17527	816	SCENE DATA BP 25	16377
240	CH 11	17253	818	CH 3	17463
242	CH 12	20074	820	CH 4	16831
244	CH 13	18103	822	CH 5	16667
246	CH 14	14955	824	CH 6	16444
248	CH 15	11080	826	CH 7	16489
250	REFLECTOR 1 POSITION 8	1899	828	CH 8	16059
252	REFLECTOR 2 POSITION 8	1085	830	CH 9	17524
254	REFL 1 POS 8 2ND LOOK	1902	832	CH 10	17251
256	REFL 2 POS 8 2ND LOOK	16379	834	CH 11	20085
258	SCENE DATA BP 8	16379	836	CH 12	18085
260	CH 3	17463	838	CH 13	14956
262	CH 4	16830	840	CH 14	3803
264	CH 5	16667	842	CH 15	3627
266	CH 6	16443	844	REFLECTOR 1 POSITION 26	3811
268	CH 7	16491	846	REFLECTOR 2 POSITION 26	3633
270	CH 8	16059	848	REFL 1 POS 26 2ND LOOK	16225
272	CH 9	17522	850	REFL 2 POS 26 2ND LOOK	16382
274	CH 10	17261	852	SCENE DATA BP 26	
276	CH 11	20084	854	CH 3	
278	CH 12	18102	856	CH 4	
280	CH 13	14956	858		
282	CH 14	12333	860		
284	CH 15	10522	862		
286	REFLECTOR 1 POSITION 9	1236	864		
288	REFLECTOR 2 POSITION 9	1054	866		
290	REFL 1 POS 9 2ND LOOK	16212	868		
292	REFL 2 POS 9 2ND LOOK	16384			
	SCENE DATA BP 9				

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17470	872	CH 5	17463
296	CH 6	16832	874	CH 6	16832
298	CH 7	16667	876	CH 7	16664
300	CH 8	16443	878	CH 8	16443
302	CH 9	16487	880	CH 9	16491
304	CH 10	16059	882	CH 10	16056
306	CH 11	17527	884	CH 11	17523
308	CH 12	17267	886	CH 12	17258
310	CH 13	20114	888	CH 13	20092
312	CH 14	18107	890	CH 14	18085
314	CH 15	14956	892	CH 15	14956
316	REFLECTOR 1 POSITION 10	1385	894	REFLECTOR 1 POSITION 27	3971
318	REFLECTOR 2 POSITION 10	1205	896	REFLECTOR 2 POSITION 27	3781
320	REFL 1 POS 10 2ND LOOK	1388	898	REFL 1 POS 27 2ND LOOK	3971
322	REFL 2 POS 10 2ND LOOK	1205	900	REFL 2 POS 27 2ND LOOK	3785
324	SCENE DATA BP 10	16224	902	SCENE DATA BP 27	16198
326	CH 3	16382	904	CH 3	16383
328	CH 4	17461	906	CH 4	17468
330	CH 5	16831	908	CH 5	16833
332	CH 6	16666	910	CH 6	16664
334	CH 7	16443	912	CH 7	16443
336	CH 8	16492	914	CH 8	16489
338	CH 9	16059	916	CH 9	16054
340	CH 10	17523	918	CH 10	17525
342	CH 11	17264	920	CH 11	17264
344	CH 12	20092	922	CH 12	20095
346	CH 13	18103	924	CH 13	18115
348	CH 14	14957	926	CH 14	14955
350	CH 15	1534	928	CH 15	4110
352	REFLECTOR 1 POSITION 11	1356	930	REFLECTOR 1 POSITION 28	3936
354	REFLECTOR 2 POSITION 11	1339	932	REFLECTOR 2 POSITION 28	4114
356	REFL 1 POS 11 2ND LOOK	1357	934	REFL 1 POS 28 2ND LOOK	3936
358	REFL 2 POS 11 2ND LOOK	16201	936	REFL 2 POS 28 2ND LOOK	16196
360	SCENE DATA BP 11	16385	938	SCENE DATA BP 28	16382
362	CH 3	17468	940	CH 3	17463
364	CH 4	16831	942	CH 4	16830
366	CH 5	16666	944	CH 5	16665
368	CH 6	16444	946	CH 6	16438
370	CH 7	16485	948	CH 7	16487
372	CH 8	16059	950	CH 8	16056
374	CH 9	17526	952	CH 9	17524
376	CH 10	17259	954	CH 10	17259
378	CH 11	20081	956	CH 11	20096
380	CH 12	18099	958	CH 12	18113
382	CH 13	14957	960	CH 13	14956
384	CH 14	1687	962	CH 14	4260
386	CH 15	1507	964	CH 15	4084
388	REFLECTOR 1 POSITION 12	1507	966	REFLECTOR 1 POSITION 29	4267
390	REFLECTOR 2 POSITION 12	1691	968	REFLECTOR 2 POSITION 29	4088
392	REFL 1 POS 12 2ND LOOK	1509	970	REFL 1 POS 29 2ND LOOK	16150
	REFL 2 POS 12 2ND LOOK	16228		REFL 2 POS 29 2ND LOOK	
	SCENE DATA BP 12			SCENE DATA BP 29	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16380	972	CH 4	16385
396	CH 5	17467	974	CH 5	17475
398	CH 6	16834	976	CH 6	16833
400	CH 7	16665	978	CH 7	16664
402	CH 8	16443	980	CH 8	16465
404	CH 9	16488	982	CH 9	16490
406	CH 10	16067	984	CH 10	16059
408	CH 11	17527	986	CH 11	17522
410	CH 12	17253	988	CH 12	17255
412	CH 13	20097	990	CH 13	20085
414	CH 14	18107	992	CH 14	18116
416	CH 15	14956	994	CH 15	14956
418	REFLECTOR 1 POSITION 13	1840	996	REFLECTOR 1 POSITION 30	4419
420	REFLECTOR 2 POSITION 13	1657	998	REFLECTOR 2 POSITION 30	4235
422	REFL 1 POS 13 2ND LOOK	1843	1000	REFL 1 POS 30 2ND LOOK	4422
424	REFL 2 POS 13 2ND LOOK	1660	1002	REFL 2 POS 30 2ND LOOK	4239
426	SCENE DATA BP 13	16199	1004	SCENE DATA BP 30	16239
428	CH 3	16382	1006	CH 3	16390
430	CH 4	17468	1008	CH 4	17469
432	CH 5	16842	1010	CH 5	16833
434	CH 6	16674	1012	CH 6	16666
436	CH 7	16450	1014	CH 7	16443
438	CH 8	16499	1016	CH 8	16490
440	CH 9	16053	1018	CH 9	16059
442	CH 10	17530	1020	CH 10	17529
444	CH 11	17274	1022	CH 11	17254
446	CH 12	20088	1024	CH 12	20087
448	CH 13	18113	1026	CH 13	18092
450	CH 14	14962	1028	CH 14	14955
452	CH 15	1990	1030	CH 15	6017
454	REFLECTOR 1 POSITION 14	1808	1032	REFLECTOR 1 COLD CAL POS	5834
456	REFLECTOR 2 POSITION 14	1995	1034	REFLECTOR 2 COLD CAL POS	6017
458	REFL 1 POS 14 2ND LOOK	1812	1036	REFL 1 COLD CAL 2ND LOOK	5833
460	REFL 2 POS 14 2ND LOOK	16197	1038	REFL 2 COLD CAL 2ND LOOK	16243
462	SCENE DATA BP 14	16383	1040	COLD CAL DATA 1	16384
464	CH 3	17471	1042	CH 3	17466
466	CH 4	16837	1044	CH 4	16833
468	CH 5	16675	1046	CH 5	16665
470	CH 6	16438	1048	CH 6	16449
472	CH 7	16493	1050	CH 7	16491
474	CH 8	16076	1052	CH 8	16063
476	CH 9	17530	1054	CH 9	17521
478	CH 10	17258	1056	CH 10	17258
480	CH 11	20086	1058	CH 11	20097
482	CH 12	18093	1060	CH 12	18110
484	CH 13	14960	1062	CH 13	14955
486	CH 14	2143	1064	CH 14	16247
488	REFLECTOR 1 POSITION 15	1963	1066	REFLECTOR 1 COLD CAL DATA 2	16383
490	REFLECTOR 2 POSITION 15	2145	1068	REFLECTOR 2 COLD CAL DATA 2	17468
492	REFL 1 POS 15 2ND LOOK	1964	1070	REFL 1 POS 30 2ND LOOK	16830
	REFL 2 POS 15 2ND LOOK			REFL 2 POS 30 2ND LOOK	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	CH 3	1072		16234
496		CH 4	1074		16390
498		CH 5	1076		17470
500		CH 6	1078		16841
502		CH 7	1080		16677
504		CH 8	1082		16445
506		CH 9	1084		16498
508		CH 10	1086		16068
510		CH 11	1088		17530
512		CH 12	1182	REFLECTOR 1 WARM CAL POS	17253
514		CH 13	1184	REFLECTOR 2 WARM CAL POS	20060
516		CH 14	1186	REFL 1 WARM CAL 2ND LOOK	18104
518		CH 15	1188	REFL 2 WARM CAL 2ND LOOK	14962
520	REFLECTOR 1 POSITION 16	CH 16	1190	WARM CAL DATA 1	2294
522	REFLECTOR 2 POSITION 16	CH 17	1192		2113
524	REFL 1 POS 16 2ND LOOK	CH 18	1194		2298
526	REFL 2 POS 16 2ND LOOK	CH 19	1196		2115
528	SCENE DATA BP 16	CH 20	1198		16259
530		CH 21	1200		16399
532		CH 22	1202		17470
534		CH 23	1204		16838
536		CH 24	1206		16671
538		CH 25	1208		16448
540		CH 26	1210		16495
542		CH 27	1212		16062
544		CH 28	1214		17537
546		CH 29	1216		17259
548		CH 30	1218		20097
550		CH 31	1220		18105
552		CH 32	1222		14959
554	REFLECTOR 1 POSITION 17	CH 33	1224		2445
556	REFLECTOR 2 POSITION 17	CH 34	1226		2262
558	REFL 1 POS 17 2ND LOOK	CH 35	1228		2449
560	REFL 2 POS 17 2ND LOOK	CH 36	1230		2265
562	SCENE DATA BP 17	CH 37	1232		16210
564		CH 38	1234		16385
566		CH 39	1236		17473
568		CH 40	1238		16837
570		CH 41	1240		16669

ELEMENT DESCRIPTION VALUE TEMPERATURE DEG C

1090	SCAN MOTOR A1-1	17312	22.28
1092	SCAN MOTOR A1-2	17854	22.13
1094	FEEDHORN A1-1	17839	22.71
1096	FEEDHORN A1-2	18055	23.17
1098	RF MUX A1-1	18646	23.80
1100	RF MUX A1-2	18824	24.19
1102	LOCAL OSCILLATOR CHANNEL 3	19948	26.24
1104	LOCAL OSCILLATOR CHANNEL 4	19940	25.92
1106	LOCAL OSCILLATOR CHANNEL 5	19654	25.88
1108	LOCAL OSCILLATOR CHANNEL 6	18901	24.64
1110	LOCAL OSCILLATOR CHANNEL 7	19043	24.71
1112	LOCAL OSCILLATOR CHANNEL 8	19119	24.75
1114	LOCAL OSCILLATOR CHANNEL 15	20054	26.10
1116	PLL LO #2 CHANNELS 9 THROUGH 14	18127	22.86
1118	PLL LO #1 CHANNELS 9 THROUGH 14	21170	28.27
1120	SPARE (NOT USED)	32767	51.52
1122	MIXER/IF AMPLIFIER CHANNEL 3	19469	24.52
1124	MIXER/IF AMPLIFIER CHANNEL 4	19493	24.76
1126	MIXER/IF AMPLIFIER CHANNEL 5	19254	24.69
1128	MIXER/IF AMPLIFIER CHANNEL 6	18840	24.25
1130	MIXER/IF AMPLIFIER CHANNEL 7	18783	24.39
1132	MIXER/IF AMPLIFIER CHANNEL 8	19320	24.76
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	18787	23.65
1136	MIXER/IF AMPLIFIER CHANNEL 15	19520	26.01
1138	IF AMPLIFIER CHANNEL 11 THRU 14	19492	25.54
1140	IF AMPLIFIER CHANNEL 9	19504	25.61
1142	IF AMPLIFIER CHANNEL 10	19665	25.62
1144	IF AMPLIFIER CHANNEL 11	18530	23.77
1146	DC/DC CONVERTER	20531	27.47
1148	IF AMPLIFIER CHANNEL 13	18574	23.82
1150	IF AMPLIFIER CHANNEL 14	18690	24.14
1152	IF AMPLIFIER CHANNEL 12	18459	23.72
1154	RF SHELF A1-1	18549	24.73
1156	RF SHELF A1-2	18832	24.44
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	17926	22.93
1160	A1-1 WARM LOAD 1	22781	21.93
1162	A1-1 WARM LOAD 2	22540	21.88
1164	A1-1 WARM LOAD 3	22765	21.95
1166	A1-1 WARM LOAD 4	22706	21.91
1168	A1-1 WARM LOAD CENTER	22785	22.04
1170	A1-2 WARM LOAD 1	22600	22.00
1172	A1-2 WARM LOAD 2	22751	21.92
1174	A1-2 WARM LOAD 3	22905	22.03
1176	A1-2 WARM LOAD 4	22686	22.06
1178	A1-2 WARM LOAD CENTER	22593	21.99
1180	TEMP SENSOR REFERENCE VOLTAGE	25318	

DESCRIPTION

STATUS

STATUS

STATUS

DESCRIPTION	STATUS	STATUS	STATUS
SCANNER A1-1 POWER	ON	ON	ON
SCANNER A1-2 POWER	ON	ON	ON
PLL POWER	PLLO # 1	PLLO # 1	PLLO # 1
ANTENNA IN WARM CAL POSITION MODE	NO	NO	NO
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO
ANTENNA IN NADIR POSITION MODE	NO	NO	NO
ANTENNA IN FULL SCAN MODE	YES	YES	YES
SURVIVAL HEATER POWER	OFF	OFF	OFF
MODULE POWER	CONNECT	CONNECT	CONNECT
COLD CAL POSITION MSB	ZERO	ZERO	ZERO
COLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA

DESCRIPTION	VALUE	DEG C	VALUE	DEG C	VALUE	DEG C
A1-1 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0	214	18.0
A1-2 SCANNER MOTOR TEMPERATURE	213	16.6	213	16.6	213	16.6
A1-1 RF SHELF TEMPERATURE	213	16.6	214	18.0	214	18.0
A1-2 RF SHELF TEMPERATURE	215	19.4	215	19.4	215	19.4
A1-1 WARM LOAD TEMPERATURE	213	16.6	213	16.6	213	16.6
A1-2 WARM LOAD TEMPERATURE	213	16.6	213	16.6	213	16.6

DESCRIPTION	VALUE	AMPS/ VOLTS	VALUE	AMPS/ VOLTS	VALUE	AMPS/ VOLTS
A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	88	41.01	88	41.01	88	41.01
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	85	39.61	85	39.61	84	39.14
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	171	14.76	171	14.76	170	14.67
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	148	-15.15	148	-15.15	147	-15.20
RECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	145	4.83	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	146	4.87	146	4.87	145	4.83
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76	169	9.76
PHASE LOCK LOOP (CHANNEL 9/14)	169	14.58	169	14.58	169	14.58
PHASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30	145	-15.30
L.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 3)	172	9.84	171	9.78	172	9.84
L.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78	171	9.78
PLLO # 2 LOCK DETECT	1	0.02	1	0.02	1	0.02
PLLO # 1 LOCK DETECT	220	4.40	220	4.40	220	4.40
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

NO.	DEG K	A1-1	DEG K	A1-2	DEG K
601	42.00			601	14.00
602	43.00			602	15.00
603	44.00			603	16.00
604	45.00			604	17.00
605	46.00			605	18.00
606	47.00			606	19.00
607	48.00			607	20.00
608	49.00			608	21.00
609	50.00			609	22.00
610	51.00			610	23.00
611	52.00			611	24.00
612	53.00			612	25.00
613	57.00			613	69.00
614	68.00			614	70.00
629	71.00			630	72.00
631	26.00			632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

NO.	DEG K	A1-1	DEG K	A1-2	DEG K
537	5.00			537	34.00
538	6.00			538	35.00
524	7.00			524	36.00
525	8.00			525	37.00
502	57.00			502	30.00
503	58.00			503	31.00
511	59.00			511	32.00
512	60.00			512	33.00
509	1.00			509	38.00
510	2.00			510	39.00
504	63.00			504	61.00
513	64.00			513	62.00
520	3.00			520	4.00
522	9.00			522	10.00
577	65.00			577	74.00
581	73.00			581	76.00

AMSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 08:43:07 SCAN NUMBER 289
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

COMMANDS
[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL0 # 1 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 3

PRE-HIGH FREQ. 1.43 Hz MLB

3.2.4.2.1.4.3

90: 748613 OP: 0810 1ST CPT
P/N: 133(70-3-II SN: 109

TDS 51

(135)
T

TEST ENG: A

11/20/99

FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	1	572	SCENE DATA	16416
2	SYNC SEQUENCE	2	574	BP	16501
3	SYNC SEQUENCE	3	576		16045
4	UNIT ID AND SERIAL NO	1	578		17369
5	DIGITAL B DATA	1	580		17130
6	DIGITAL B DATA	2	582		19940
7	DIGITAL B DATA	3	584		17889
8	DIGITAL B DATA	4	586		14934
10	REFLECTOR 1 POSITION	1	588	REFLECTOR 1 POSITION	2598
12	REFLECTOR 2 POSITION	1	590	REFLECTOR 2 POSITION	2418
14	REFL 1 POS	1	592	REFL 1 POS	2601
16	REFL 2 POS	1	594	REFL 2 POS	2419
18	SCENE DATA	BP	596	SCENE DATA	16202
20			598		16336
22			600		17444
24			602		16829
26			604		16663
28			606		16423
30			608		16495
32			610		16017
34			612		17358
36			614		17121
38			616		19922
40			618		17888
42			620		14934
44			622		2748
46	REFLECTOR 1 POSITION	1	624	REFLECTOR 1 POSITION	2569
48	REFLECTOR 2 POSITION	1	626	REFLECTOR 2 POSITION	2753
50	REFL 1 POS	2	628	REFL 1 POS	2571
52	REFL 2 POS	2	630	REFL 2 POS	16196
54	SCENE DATA	BP	632	SCENE DATA	16323
56			634		17424
58			636		16816
60			638		16646
62			640		16405
64			642		16489
66			644		16022
68			646		17356
70			648		17128
72			650		19933
74			652		17863
76			654		14927
78	REFLECTOR 1 POSITION	1	656	REFLECTOR 1 POSITION	2899
80	REFLECTOR 2 POSITION	1	658	REFLECTOR 2 POSITION	2718
82	REFL 1 POS	3	660	REFL 1 POS	2904
84	REFL 2 POS	3	662	REFL 2 POS	2722
86	SCENE DATA	BP	664	SCENE DATA	16198
88			666		16322
90			668		17429
92			670		16816

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16648	672	REFLECTOR 1 POSITION 21	16650
96	CH 8	16403	674	REFLECTOR 2 POSITION 21	16403
98	CH 9	16488	676	REFL 1 POS 21	16495
100	CH 10	16021	678	REFL 2 POS 21	16016
102	CH 11	17349	680	SCENE DATA BP 21	17355
104	CH 12	17126	682	CH 3	17122
106	CH 13	19936	684	CH 4	19938
108	CH 14	17871	686	CH 5	17869
110	CH 15	14930	688	CH 6	14928
112	REFLECTOR 1 POSITION 4	474	690	CH 7	3052
114	REFLECTOR 2 POSITION 4	296	692	CH 8	2868
116	REFL 1 POS 4	479	694	CH 9	3056
118	REFL 2 POS 4	300	696	CH 10	2874
120	SCENE DATA BP 4	16198	698	CH 11	16201
122	CH 3	16322	700	CH 12	16322
124	CH 4	17425	702	CH 13	17425
126	CH 5	16827	704	CH 14	16818
128	CH 6	16654	706	CH 15	16646
130	CH 7	16405	708	CH 16	16405
132	CH 8	16501	710	CH 17	16490
134	CH 9	16028	712	CH 18	16021
136	CH 10	17357	714	CH 19	17353
138	CH 11	17117	716	CH 20	17122
140	CH 12	19933	718	CH 21	19944
142	CH 13	17874	720	CH 22	17858
144	CH 14	14931	722	CH 23	14927
146	CH 15	624	724	REFLECTOR 1 POSITION 22	3202
148	REFLECTOR 2 POSITION 5	444	726	REFLECTOR 2 POSITION 22	3023
150	REFL 1 POS 5	632	728	REFL 1 POS 22	3206
152	REFL 2 POS 5	449	730	REFL 2 POS 22	3028
154	SCENE DATA BP 5	16194	732	SCENE DATA BP 22	16195
156	CH 3	16322	734	CH 3	16322
158	CH 4	17423	736	CH 4	17426
160	CH 5	16823	738	CH 5	16816
162	CH 6	16658	740	CH 6	16645
164	CH 7	16406	742	CH 7	16407
166	CH 8	16498	744	CH 8	16489
168	CH 9	16034	746	CH 9	16022
170	CH 10	17348	748	CH 10	17354
172	CH 11	17133	750	CH 11	17128
174	CH 12	19950	752	CH 12	19938
176	CH 13	17885	754	CH 13	17898
178	CH 14	14931	756	CH 14	14926
180	CH 15	778	758	REFLECTOR 1 POSITION 23	3351
182	REFLECTOR 2 POSITION 6	594	760	REFLECTOR 2 POSITION 23	3172
184	REFL 1 POS 6	782	762	REFL 1 POS 23	3357
186	REFL 2 POS 6	598	764	REFL 2 POS 23	3178
188	SCENE DATA BP 6	16199	766	SCENE DATA BP 23	16197
190	CH 3	16322	768	CH 3	16325
192	CH 4	17422	770	CH 4	17428

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16825	772	REFLECTOR 1 POSITION 24	16820
196	CH 7	16658	774	REFLECTOR 2 POSITION 24	16648
198	CH 8	16408	776	REFLECTOR 2 POSITION 24	16409
200	CH 9	16500	778	REFL 1 POS 24	16487
202	CH 10	16016	780	REFL 2 POS 24	16019
204	CH 11	17362	782	SCENE DATA BP 24	17355
206	CH 12	17129	784	CH 3	17121
208	CH 13	19943	786	CH 4	19927
210	CH 14	17873	788	CH 5	17887
212	CH 15	14934	790	CH 6	14927
214	CH 16	929	792	CH 7	3505
216	CH 17	749	794	CH 8	3325
218	CH 18	933	796	CH 9	3308
220	CH 19	748	798	CH 10	3330
222	CH 20	16204	800	CH 11	16200
224	CH 21	16324	802	CH 12	17425
226	CH 22	17425	804	CH 13	16814
228	CH 23	16817	806	CH 14	16645
230	CH 24	16647	808	CH 15	16404
232	CH 25	16405	810	CH 16	16489
234	CH 26	16489	812	CH 17	16023
236	CH 27	16019	814	CH 18	17352
238	CH 28	17354	816	CH 19	17128
240	CH 29	17123	818	CH 20	19930
242	CH 30	19931	820	CH 21	17894
244	CH 31	17886	822	CH 22	14927
246	CH 32	14926	824	CH 23	3654
248	CH 33	1081	826	CH 24	3476
250	CH 34	899	828	CH 25	3659
252	CH 35	1084	830	CH 26	3481
254	CH 36	902	832	CH 27	16190
256	CH 37	16186	834	CH 28	16323
258	CH 38	16322	836	CH 29	17422
260	CH 39	17430	838	CH 30	16816
262	CH 40	16820	840	CH 31	16650
264	CH 41	16648	842	CH 32	16408
266	CH 42	16402	844	CH 33	16489
268	CH 43	16491	846	CH 34	16024
270	CH 44	16024	848	CH 35	17358
272	CH 45	17351	850	CH 36	17126
274	CH 46	17130	852	CH 37	19932
276	CH 47	19945	854	CH 38	17881
278	CH 48	17894	856	CH 39	14927
280	CH 49	14931	858	CH 40	3805
282	CH 50	12333	860	CH 41	3627
284	CH 51	1051	862	CH 42	3811
286	CH 52	12316	864	CH 43	3633
288	CH 53	1054	866	CH 44	16216
290	CH 54	16197	868	CH 45	16329
292	CH 55	16327	870	CH 46	16329

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17428	872	CH 5	17426
296	CH 6	16820	874	CH 6	16816
298	CH 7	16649	876	CH 7	16648
300	CH 8	16408	878	CH 8	16408
302	CH 9	16489	880	CH 9	16488
304	CH 10	16019	882	CH 10	16020
306	CH 11	17352	884	CH 11	17346
308	CH 12	17116	886	CH 12	17131
310	CH 13	19920	888	CH 13	19935
312	CH 14	17890	890	CH 14	17879
314	CH 15	14927	892	CH 15	14926
316	REFLECTOR 1 POSITION 10	11384	894	REFLECTOR 1 POSITION 27	3969
318	REFLECTOR 2 POSITION 10	1203	896	REFLECTOR 2 POSITION 27	3782
320	REFL 1 POS 10 2ND LOOK	11388	898	REFL 1 POS 27 2ND LOOK	3971
322	REFL 2 POS 10 2ND LOOK	1205	900	REFL 2 POS 27 2ND LOOK	3786
324	SCENE DATA BP 10	16204	902	SCENE DATA BP 27	16187
326	CH 3	16323	904	CH 3	16328
328	CH 4	17425	906	CH 4	17428
330	CH 5	16815	908	CH 5	16816
332	CH 6	16651	910	CH 6	16648
334	CH 7	16409	912	CH 7	16409
336	CH 8	16489	914	CH 8	16488
338	CH 9	16022	916	CH 9	16019
340	CH 10	17351	918	CH 10	17355
342	CH 11	17125	920	CH 11	17127
344	CH 12	19926	922	CH 12	19930
346	CH 13	17873	924	CH 13	17863
348	CH 14	14927	926	CH 14	14927
350	CH 15	1535	928	CH 15	4111
352	REFLECTOR 1 POSITION 11	1356	930	REFLECTOR 1 POSITION 28	3938
354	REFL 1 POS 11 2ND LOOK	1359	932	REFL 1 POS 28 2ND LOOK	4114
356	REFL 2 POS 11 2ND LOOK	1357	934	REFL 2 POS 28 2ND LOOK	3936
358	SCENE DATA BP 11	16182	936	SCENE DATA BP 28	16181
360	CH 3	16325	938	CH 3	16326
362	CH 4	17432	940	CH 4	17426
364	CH 5	16815	942	CH 5	16816
366	CH 6	16649	944	CH 6	16645
368	CH 7	16407	946	CH 7	16402
370	CH 8	16491	948	CH 8	16490
372	CH 9	16024	950	CH 9	16021
374	CH 10	17345	952	CH 10	17357
376	CH 11	17116	954	CH 11	17127
378	CH 12	19934	956	CH 12	19933
380	CH 13	17868	958	CH 13	17869
382	CH 14	14927	960	CH 14	14926
384	CH 15	1686	962	CH 15	4259
386	REFLECTOR 1 POSITION 12	1507	964	REFLECTOR 1 POSITION 29	4084
388	REFL 1 POS 12 2ND LOOK	1691	966	REFL 1 POS 29 2ND LOOK	4266
390	REFL 2 POS 12 2ND LOOK	1509	968	REFL 2 POS 29 2ND LOOK	4088
392	SCENE DATA BP 12	16211	970	SCENE DATA BP 29	16147

AMSU A1_33 A1.EXE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16328	972	REFLECTOR 1 POSITION 30	16344
396	CH 5	17426	974	REFLECTOR 2 POSITION 30	17448
398	CH 6	16820	976	REFL 1 POS 30 2ND LOOK	16816
400	CH 7	16647	978	REFL 2 POS 30 2ND LOOK	16648
402	CH 8	16405	980	SCENE DATA BP 30	16440
404	CH 9	16487	982	CH 3	16485
406	CH 10	16020	984	CH 4	16020
408	CH 11	17356	986	CH 5	17353
410	CH 12	17120	988	CH 6	17113
412	CH 13	19944	990	CH 7	19950
414	CH 14	17875	992	CH 8	17892
416	CH 15	14927	994	CH 9	14926
418	REFLECTOR 1 POSITION 13	1841	996	REFLECTOR 1 COLD CAL POS	4418
420	REFLECTOR 2 POSITION 13	1658	998	REFLECTOR 2 COLD CAL POS	4235
422	REFL 1 POS 13 2ND LOOK	1843	1000	REFL 1 COLD CAL 2ND LOOK	4235
424	REFL 2 POS 13 2ND LOOK	1660	1002	REFL 2 COLD CAL 2ND LOOK	4240
426	SCENE DATA BP 13	16185	1004	COLD CAL DATA 1	16220
428	CH 3	16330	1006	CH 3	16340
430	CH 4	17433	1008	CH 4	17434
432	CH 5	16831	1010	CH 5	16817
434	CH 6	16659	1012	CH 6	16647
436	CH 7	16416	1014	CH 7	16409
438	CH 8	16502	1016	CH 8	16486
440	CH 9	16019	1018	CH 9	16020
442	CH 10	17373	1020	CH 10	17355
444	CH 11	17130	1022	CH 11	17132
446	CH 12	19937	1024	CH 12	19954
448	CH 13	17892	1026	CH 13	17856
450	CH 14	14934	1028	CH 14	14926
452	CH 15	1989	1030	REFLECTOR 1 COLD CAL POS	6018
454	REFLECTOR 1 POSITION 14	1808	1032	REFLECTOR 2 COLD CAL POS	5833
456	REFL 1 POS 14 2ND LOOK	1994	1034	REFL 1 COLD CAL 2ND LOOK	6017
458	REFL 2 POS 14 2ND LOOK	1812	1036	REFL 2 COLD CAL 2ND LOOK	5833
460	SCENE DATA BP 14	16184	1038	COLD CAL DATA 1	16233
462	CH 3	16326	1040	CH 3	16329
464	CH 4	17435	1042	CH 4	17429
466	CH 5	16825	1044	CH 5	16816
468	CH 6	16656	1046	CH 6	16647
470	CH 7	16401	1048	CH 7	16416
472	CH 8	16049	1050	CH 8	16022
474	CH 9	17358	1052	CH 9	17352
476	CH 10	17128	1054	CH 10	17122
478	CH 11	19938	1056	CH 11	19935
480	CH 12	17864	1058	CH 12	17855
482	CH 13	14933	1060	CH 13	14927
484	CH 14	2144	1062	CH 14	14929
486	CH 15	1964	1064	CH 15	16239
488	REFLECTOR 1 POSITION 15	2147	1066	REFLECTOR 2 POSITION 15	16331
490	REFLECTOR 2 POSITION 15	2147	1068	REFL 1 POS 15 2ND LOOK	17431
492	REFL 1 POS 15 2ND LOOK	1964	1070	REFL 2 POS 15 2ND LOOK	16814

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE DEG C
1090	SCAN MOTOR A1-1	17394	22.43
1092	SCAN MOTOR A1-2	18095	22.58
1094	FEEDHORN A1-1	18357	23.68
1096	FEEDHORN A1-2	18874	24.71
1098	RF MUX A1-1	19334	25.10
1100	RF MUX A1-2	19889	26.19
1102	LOCAL OSCILLATOR CHANNEL 3	20678	27.62
1104	LOCAL OSCILLATOR CHANNEL 4	20647	27.25
1106	LOCAL OSCILLATOR CHANNEL 5	20454	27.40
1108	LOCAL OSCILLATOR CHANNEL 6	19220	25.24
1110	LOCAL OSCILLATOR CHANNEL 7	19673	25.90
1112	LOCAL OSCILLATOR CHANNEL 8	19852	27.14
1114	LOCAL OSCILLATOR CHANNEL 15	20601	27.12
1116	PLL LO #2 CHANNELS 9 THROUGH 14	19195	24.87
1118	PLL LO #1 CHANNELS 9 THROUGH 14	21311	28.89
1120	SPARE (NOT USED)	32767	51.27
1122	MIXER/IF AMPLIFIER CHANNEL 3	20537	26.54
1124	MIXER/IF AMPLIFIER CHANNEL 4	20532	26.73
1126	MIXER/IF AMPLIFIER CHANNEL 5	20249	26.57
1128	MIXER/IF AMPLIFIER CHANNEL 6	19497	26.50
1130	MIXER/IF AMPLIFIER CHANNEL 7	19521	25.78
1132	MIXER/IF AMPLIFIER CHANNEL 8	20327	26.67
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	19542	25.08
1136	MIXER/IF AMPLIFIER CHANNEL 15	20094	27.10
1138	IF AMPLIFIER CHANNEL 11 THRU 14	20105	26.70
1140	IF AMPLIFIER CHANNEL 9	20120	26.78
1142	IF AMPLIFIER CHANNEL 10	20282	26.79
1144	IF AMPLIFIER CHANNEL 11	19217	25.07
1146	DC/DC CONVERTER	20748	27.88
1148	IF AMPLIFIER CHANNEL 13	19249	25.10
1150	IF AMPLIFIER CHANNEL 14	19366	25.42
1152	IF AMPLIFIER CHANNEL 12	19142	25.01
1154	RF SHELF A1-1	19165	25.90
1156	RF SHELF A1-2	19760	26.20
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	18457	23.93
1160	A1-1 WARM LOAD 1	22895	22.15
1162	A1-1 WARM LOAD 2	22657	22.11
1164	A1-1 WARM LOAD 3	22885	22.18
1166	A1-1 WARM LOAD 4	22823	22.14
1168	A1-1 WARM LOAD CENTER	22899	22.26
1170	A1-2 WARM LOAD 1	22890	22.56
1172	A1-2 WARM LOAD 2	23041	22.48
1174	A1-2 WARM LOAD 3	23198	22.60
1176	A1-2 WARM LOAD 4	22971	22.61
1178	A1-2 WARM LOAD CENTER	22877	22.54
1180	TEMP SENSOR REFERENCE VOLTAGE	25319	

DESCRIPTION

STATUS

STATUS

STATUS

SCANNER A1-1 POWER	ON		ON
SCANNER A1-2 POWER	ON		ON
PLL POWER	PLLO # 1	PLLO # 1	PLLO # 1
ANTENNA IN WARM CAL POSITION MODE	NO	NO	NO
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO
ANTENNA IN NADIR POSITION MODE	NO	NO	NO
ANTENNA IN FULL SCAN MODE	YES	YES	YES
SURVIVAL HEATER POWER	OFF	OFF	OFF
MODULE POWER	CONNECT	CONNECT	CONNECT
COLD CAL POSITION MSB	ZERO	ZERO	ZERO
COLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA

DESCRIPTION

VALUE

DEG C

VALUE

DEG C

A1-1 SCANNER MOTOR TEMPERATURE	213	16.6	213	16.6
A1-2 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0
A1-1 RF SHELF TEMPERATURE	214	18.0	214	18.0
A1-2 RF SHELF TEMPERATURE	216	20.7	216	20.7
A1-1 WARM LOAD TEMPERATURE	213	16.6	213	16.6
A1-2 WARM LOAD TEMPERATURE	213	16.6	214	18.0

DESCRIPTION

VALUE

VALUE

VALUE

AMPS/VOLTS

A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	89	41.47	89	41.47
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	86	40.08	85	39.61
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	171	14.84	171	14.76
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	149	-15.10	149	-15.10
RECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	147	4.90	146	4.87
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76
PHASE LOCK LOOP (CHANNEL 9/14)	169	14.58	169	14.58
PHASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30
L.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 3)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78
PLLO # 2 LOCK DETECT	1	0.02	1	0.02
PLLO # 1 LOCK DETECT	219	4.38	219	4.38
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

AMSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 08:47:01 SCAN NUMBER 317
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

COMMANDS
[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLLO # 1 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]
POWER [4] ON
SELECT TOUCHSCREEN BUTTON 3 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

Post - HIGH FREQ. 1.43 Hz MLO

3.2.4.2.1.4.3

TD5 51

1st CPT

SN: 748613 OP: 0810
PN: 1331720-3-II SN: 109

139
T

TEST ENG. DAY 11/20/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	11111111	572	SCENE DATA	16402
2	SYNC SEQUENCE	11111111	574	BP	16489
3	SYNC SEQUENCE	11111111	576		16032
4	UNIT ID AND SERIAL NO	00100001	578		17374
5	DIGITAL B DATA	00000010	580		17126
6	DIGITAL B DATA	00001110	582		19912
7	DIGITAL B DATA	00000000	584		17866
8	DIGITAL B DATA	00000000	586		14906
10	REFLECTOR 1 POSITION	23	588	REFLECTOR 1 POSITION	2597
12	REFLECTOR 2 POSITION	16225	590	REFLECTOR 2 POSITION	2416
14	REFL 1 POS	24	592	REFL 1 POS	2601
16	REFL 2 POS	16225	594	REFL 2 POS	2419
18	SCENE DATA	16209	596	SCENE DATA	16190
20	BP	17414	598		16309
22		16795	600		17422
24		16633	602		16811
26		16406	604		16647
28		16473	606		16410
30		15998	608		16005
32		17357	610		17370
34		17120	612		17115
36		19931	614		19910
38		17872	616		17890
40		14895	618		17904
42		166	620		14904
44	REFLECTOR 1 POSITION	16372	622	REFLECTOR 1 POSITION	2748
46	REFLECTOR 2 POSITION	174	624	REFLECTOR 2 POSITION	2567
48	REFL 1 POS	16375	626	REFL 1 POS	2752
50	REFL 2 POS	16211	628	REFL 2 POS	2570
52	SCENE DATA	16301	630	SCENE DATA	16178
54		17414	632		16299
56		16633	634		17402
58		16391	636		16797
60		16478	638		16632
62		16005	640		16385
64		17361	642		16473
66		17113	644		15996
68		19949	646		17363
70		17897	648		17124
72		14895	650		19929
74		324	652		17905
76	REFLECTOR 1 POSITION	143	654	REFLECTOR 1 POSITION	14898
78	REFLECTOR 2 POSITION	326	656	REFLECTOR 2 POSITION	2899
80	REFL 1 POS	150	658	REFL 1 POS	2717
82	REFL 2 POS	16183	660	REFL 2 POS	2904
84	SCENE DATA	16295	662	SCENE DATA	2722
86		17409	664		16182
88		16800	666		16296
90			668		17402
92			670		16798

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16633	672	CH 7	16632
96	CH 8	16386	674	CH 8	16386
98	CH 9	16475	676	CH 9	16473
100	CH 10	16006	678	CH 10	16004
102	CH 11	17359	680	CH 11	17356
104	CH 12	17111	682	CH 12	17111
106	CH 13	19920	684	CH 13	19933
108	CH 14	17876	686	CH 14	17889
110	CH 15	14898	688	CH 15	14896
112	REFLECTOR 1 POSITION	474	690	REFLECTOR 1 POSITION 21	3053
114	REFLECTOR 2 POSITION	297	692	REFLECTOR 2 POSITION 21	2868
116	REFL 1 POS 4	478	694	REFL 1 POS 21	3056
118	REFL 2 POS 4	299	696	REFL 2 POS 21	2874
120	SCENE DATA BP 4	16183	698	SCENE DATA BP 21	16184
122	CH 3	16299	700	CH 3	16296
124	CH 4	17402	702	CH 4	17405
126	CH 5	16805	704	CH 5	16797
128	CH 6	16633	706	CH 6	16633
130	CH 7	16391	708	CH 7	16382
132	CH 8	16480	710	CH 8	16471
134	CH 9	16017	712	CH 9	16004
136	CH 10	17363	714	CH 10	17359
138	CH 11	17116	716	CH 11	17111
140	CH 12	19910	718	CH 12	19909
142	CH 13	17867	720	CH 13	17882
144	CH 14	14900	722	CH 14	14897
146	CH 15	625	724	REFLECTOR 1 POSITION 22	3202
148	REFLECTOR 2 POSITION	445	726	REFLECTOR 2 POSITION 22	3203
150	REFL 1 POS 5	631	728	REFL 1 POS 22	3206
152	REFL 2 POS 5	448	730	REFL 2 POS 22	3028
154	SCENE DATA BP 5	16180	732	SCENE DATA BP 22	16185
156	CH 3	16292	734	CH 3	16299
158	CH 4	17405	736	CH 4	17404
160	CH 5	16802	738	CH 5	16797
162	CH 6	16641	740	CH 6	16632
164	CH 7	16385	742	CH 7	16388
166	CH 8	16485	744	CH 8	16472
168	CH 9	16015	746	CH 9	16003
170	CH 10	17360	748	CH 10	17358
172	CH 11	17126	750	CH 11	17109
174	CH 12	19927	752	CH 12	19949
176	CH 13	17858	754	CH 13	17880
178	CH 14	14901	756	CH 14	14897
180	CH 15	776	758	REFLECTOR 1 POSITION 23	33350
182	REFLECTOR 2 POSITION	597	760	REFLECTOR 2 POSITION 23	33350
184	REFL 1 POS 6	781	762	REFL 1 POS 23	33356
186	REFL 2 POS 6	599	764	REFL 2 POS 23	33356
188	SCENE DATA BP 6	16185	766	SCENE DATA BP 23	16186
190	CH 3	16298	768	CH 3	16295
192	CH 4	17404	770	CH 4	17406
	CH 5			CH 5	

FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH	16808	772	REFLECTOR 1 POSITION	16797
196	CH	16642	774	REFLECTOR 2 POSITION	16632
198	CH	16387	776	REFLECTOR 2 POSITION	16386
200	CH	16484	778	REFL 1 POS	16470
202	CH	16000	780	REFL 2 POS	16001
204	CH	17372	782	SCENE DATA	17357
206	CH	17126	784	BP	17124
208	CH	19930	786		19918
210	CH	17864	788		17874
212	CH	14905	790		14895
214	CH	929	792		3504
216	CH	749	794		3324
218	CH	933	796		3508
220	CH	749	798		3330
222	CH	16192	800		16183
224	CH	16299	802		16297
226	CH	17402	804		17407
228	CH	16797	806		16797
230	CH	16634	808		16630
232	CH	16384	810		16384
234	CH	16472	812		16477
236	CH	16004	814		16004
238	CH	17361	816		17363
240	CH	17112	818		17118
242	CH	19914	820		19912
244	CH	17878	822		17897
246	CH	14896	824		14895
248	CH	1080	826		3654
250	CH	901	828		3475
252	CH	1085	830		3659
254	CH	903	832		3480
256	CH	16173	834		16176
258	CH	16294	836		16296
260	CH	17407	838		17404
262	CH	16795	840		16797
264	CH	16633	842		16630
266	CH	16384	844		16386
268	CH	16474	846		16477
270	CH	16008	848		16002
272	CH	17353	850		17366
274	CH	17116	852		17117
276	CH	19925	854		19921
278	CH	17889	856		17877
280	CH	14898	858		14896
282	CH	12333	860		3807
284	CH	10522	862		3626
286	CH	1237	864		3811
288	CH	1054	866		3632
290	CH	16182	868		16196
292	CH	16303	870		16303

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17409	872	CH 5	17408
296	CH 6	16795	874	CH 6	16795
298	CH 7	16631	876	CH 7	16632
300	CH 8	16390	878	CH 8	16385
302	CH 9	16471	880	CH 9	16471
304	CH 10	15999	882	CH 10	16003
306	CH 11	17358	884	CH 11	17358
308	CH 12	17119	886	CH 12	17118
310	CH 13	19920	888	CH 13	19920
312	CH 14	17881	890	CH 14	17897
314	CH 15	14896	892	CH 15	14895
316	REFLECTOR 1 POSITION 10	1385	894	REFLECTOR 1 POSITION 27	3969
318	REFLECTOR 2 POSITION 10	1205	896	REFLECTOR 2 POSITION 27	3780
320	REFL 1 POS 10 2ND LOOK	1389	898	REFL 1 POS 27 2ND LOOK	3971
322	REFL 2 POS 10 2ND LOOK	1205	900	REFL 2 POS 27 2ND LOOK	3785
324	SCENE DATA BP 10	16192	902	SCENE DATA BP 27	16179
326	CH 3	16299	904	CH 3	16301
328	CH 4	17403	906	CH 4	17410
330	CH 5	16796	908	CH 5	16791
332	CH 6	16630	910	CH 6	16630
334	CH 7	16385	912	CH 7	16386
336	CH 8	16474	914	CH 8	16477
338	CH 9	16003	916	CH 9	16001
340	CH 10	17364	918	CH 10	17362
342	CH 11	17117	920	CH 11	17120
344	CH 12	19940	922	CH 12	19951
346	CH 13	17892	924	CH 13	17896
348	CH 14	14896	926	CH 14	14895
350	CH 15	1534	928	CH 15	4110
352	REFLECTOR 1 POSITION 11	1355	930	REFLECTOR 1 POSITION 28	3938
354	REFLECTOR 2 POSITION 11	1539	932	REFLECTOR 2 POSITION 28	4116
356	REFL 1 POS 11 2ND LOOK	1357	934	REFL 1 POS 28 2ND LOOK	3936
358	REFL 2 POS 11 2ND LOOK	16166	936	REFL 2 POS 28 2ND LOOK	16169
360	SCENE DATA BP 11	16297	938	SCENE DATA BP 28	16304
362	CH 3	17409	940	CH 3	17406
364	CH 4	16794	942	CH 4	16794
366	CH 5	16633	944	CH 5	16629
368	CH 6	16389	946	CH 6	16385
370	CH 7	16472	948	CH 7	16470
372	CH 8	16004	950	CH 8	15994
374	CH 9	17362	952	CH 9	17358
376	CH 10	17119	954	CH 10	17115
378	CH 11	19903	956	CH 11	19908
380	CH 12	17876	958	CH 12	17890
382	CH 13	14898	960	CH 13	14896
384	CH 14	1686	962	CH 14	4262
386	CH 15	1507	964	CH 15	4083
388	REFLECTOR 1 POSITION 12	1691	966	REFLECTOR 1 POSITION 29	4267
390	REFLECTOR 2 POSITION 12	1509	968	REFLECTOR 2 POSITION 29	4087
392	REFL 1 POS 12 2ND LOOK	16196	970	REFL 1 POS 29 2ND LOOK	16134
	REFL 2 POS 12 2ND LOOK			REFL 2 POS 29 2ND LOOK	
	SCENE DATA BP 12			SCENE DATA BP 29	
	CH 3			CH 3	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH	16304	972	REFLECTOR 1 POSITION 30	16320
396	CH	17405	974	REFLECTOR 2 POSITION 30	17431
398	CH	16795	976	REFL 1 POS 30	16796
400	CH	16631	978	REFL 2 POS 30	16635
402	CH	16386	980	SCENE DATA BP 30	16476
404	CH	16475	982	CH	16476
406	CH	16003	984	CH	16005
408	CH	17359	986	CH	17358
410	CH	17122	988	CH	17117
412	CH	19918	990	CH	19918
414	CH	17874	992	CH	17895
416	CH	14895	994	CH	14894
418	REFLECTOR 1 POSITION 13	1840	996	REFLECTOR 1 POSITION 30	4418
420	REFLECTOR 2 POSITION 13	1658	998	REFLECTOR 2 POSITION 30	4236
422	REFL 1 POS 13	1843	1000	REFL 1 POS 30	4421
424	REFL 2 POS 13	1660	1002	REFL 2 POS 30	4240
426	SCENE DATA BP 13	16172	1004	CH	16208
428	CH	16306	1006	CH	16311
430	CH	17409	1008	CH	17406
432	CH	16805	1010	CH	16793
434	CH	16641	1012	CH	16632
436	CH	16395	1014	CH	16389
438	CH	16485	1016	CH	16469
440	CH	16001	1018	CH	16006
442	CH	17381	1020	CH	17358
444	CH	17128	1022	CH	17109
446	CH	19924	1024	CH	19916
448	CH	17895	1026	CH	17896
450	CH	14904	1028	CH	14895
452	REFLECTOR 1 POSITION 14	1990	1030	REFLECTOR 1 COLD CAL POS	6016
454	REFLECTOR 2 POSITION 14	1807	1032	REFLECTOR 2 COLD CAL POS	5833
456	REFL 1 POS 14	1994	1034	REFL 1 COLD CAL 2ND LOOK	6016
458	REFL 2 POS 14	1812	1036	REFL 2 COLD CAL 2ND LOOK	5833
460	SCENE DATA BP 14	16177	1038	COLD CAL DATA 1	16219
462	CH	16304	1040	CH	16300
464	CH	17411	1042	CH	17408
466	CH	16805	1044	CH	16791
468	CH	16642	1046	CH	16631
470	CH	16384	1048	CH	16397
472	CH	16025	1050	CH	16471
474	CH	17370	1052	CH	15997
476	CH	17122	1054	CH	17363
478	CH	19923	1056	CH	17116
480	CH	17882	1058	CH	19908
482	CH	14904	1060	CH	17874
484	REFLECTOR 1 POSITION 15	2143	1062	CH	14896
486	REFLECTOR 2 POSITION 15	1963	1064	CH	16221
488	REFL 1 POS 15	2147	1066	CH	16300
490	REFL 2 POS 15	1964	1068	CH	17411
492	2ND LOOK	1964	1070	CH	16791

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	CH 3	1072		CH 7
496		CH 4	1074		CH 8
498		CH 5	1076		CH 9
500		CH 6	1078		CH 10
502		CH 7	1080		CH 11
504		CH 8	1082		CH 12
506		CH 9	1084		CH 13
508		CH 10	1086		CH 14
510		CH 11	1088		CH 15
512		CH 12	1182	REFLECTOR 1 WARM CAL POS	10416
514		CH 13	1184	REFLECTOR 2 WARM CAL POS	10232
516		CH 14	1186	REFL 1 WARM CAL 2ND LOOK	10416
518		CH 15	1188	REFL 2 WARM CAL 2ND LOOK	10232
520	REFLECTOR 1 POSITION 16	CH 16	1190	WARM CAL DATA 1	16178
522	REFLECTOR 2 POSITION 16	CH 16	1192		16286
524	REFL 1 POS 16 2ND LOOK	CH 16	1194		17397
526	REFL 2 POS 16 2ND LOOK	CH 16	1196		16783
528	SCENE DATA BP 16	CH 16	1198		16621
530		CH 3	1200		16379
532		CH 4	1202		16464
534		CH 5	1204		15995
536		CH 6	1206		17352
538		CH 7	1208		17108
540		CH 8	1210		19908
542		CH 9	1212		17873
544		CH 10	1214		14890
546		CH 11	1216	WARM CAL DATA 2	16170
548		CH 12	1218		16286
550		CH 13	1220		17394
552		CH 14	1222		16783
554		CH 15	1224		16620
556	REFLECTOR 1 POSITION 17	CH 17	1226		16375
558	REFLECTOR 2 POSITION 17	CH 17	1228		16466
560	REFL 1 POS 17 2ND LOOK	CH 17	1230		15991
562	REFL 2 POS 17 2ND LOOK	CH 17	1232		17349
564	SCENE DATA BP 17	CH 17	1234		17103
566		CH 3	1236		19905
568		CH 4	1238		17873
570		CH 5	1240		14890

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
1090	SCAN MOTOR A1-1	17440	22.52	52
1092	SCAN MOTOR A1-2	18144	22.68	68
1094	FEEDHORN A1-1	18424	23.81	81
1096	FEEDHORN A1-2	18964	24.88	88
1098	RF MUX A1-1	19477	25.37	37
1100	RF MUX A1-2	20059	26.51	51
1102	LOCAL OSCILLATOR CHANNEL 3	21004	28.23	23
1104	LOCAL OSCILLATOR CHANNEL 4	20992	27.90	90
1106	LOCAL OSCILLATOR CHANNEL 5	20749	27.95	95
1108	LOCAL OSCILLATOR CHANNEL 6	19444	25.67	67
1110	LOCAL OSCILLATOR CHANNEL 7	19883	26.30	30
1112	LOCAL OSCILLATOR CHANNEL 8	20142	27.69	69
1114	LOCAL OSCILLATOR CHANNEL 15	20888	27.66	66
1116	PLL LO #2 CHANNELS 9 THROUGH 14	19267	25.01	01
1118	PLL LO #1 CHANNELS 9 THROUGH 14	21816	29.85	85
1120	SPARE (NOT USED)	32767	51.27	27
1122	MIXER/IF AMPLIFIER CHANNEL 3	20721	26.89	89
1124	MIXER/IF AMPLIFIER CHANNEL 4	20723	27.09	09
1126	MIXER/IF AMPLIFIER CHANNEL 5	20433	26.92	92
1128	MIXER/IF AMPLIFIER CHANNEL 6	19664	25.81	81
1130	MIXER/IF AMPLIFIER CHANNEL 7	19664	25.09	09
1132	MIXER/IF AMPLIFIER CHANNEL 8	19685	26.05	05
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20530	27.05	05
1136	MIXER/IF AMPLIFIER CHANNEL 15	19658	25.30	30
1138	MIXER/IF AMPLIFIER CHANNEL 11 THRU 14	20375	27.63	63
1140	IF AMPLIFIER CHANNEL 9	20346	27.16	16
1142	IF AMPLIFIER CHANNEL 10	20365	27.25	25
1144	IF AMPLIFIER CHANNEL 11	20528	27.26	26
1146	DC/DC CONVERTER	19376	25.37	37
1148	IF AMPLIFIER CHANNEL 13	21129	28.59	59
1150	IF AMPLIFIER CHANNEL 14	19406	25.40	40
1152	IF AMPLIFIER CHANNEL 12	19522	25.72	72
1154	RF SHELF A1-1	19299	25.31	31
1156	RF SHELF A1-2	19373	26.30	30
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	19949	26.56	56
1160	A1-1 WARM LOAD 1	18526	24.06	06
1162	A1-1 WARM LOAD 2	22919	22.20	20
1164	A1-1 WARM LOAD 3	22682	22.16	16
1166	A1-1 WARM LOAD 4	22904	22.22	22
1168	A1-1 WARM LOAD CENTER	22840	22.17	17
1170	A1-2 WARM LOAD 1	22925	22.31	31
1172	A1-2 WARM LOAD 2	22937	22.65	65
1174	A1-2 WARM LOAD 3	23087	22.57	57
1176	A1-2 WARM LOAD 4	23244	22.69	69
1178	A1-2 WARM LOAD CENTER	23020	22.71	71
1180	TEMP SENSOR REFERENCE VOLTAGE	22925	22.63	63

DESCRIPTION

STATUS

STATUS

STATUS

DESCRIPTION	STATUS	STATUS	STATUS
SCANNER A1-1 POWER	ON	ON	ON
SCANNER A1-2 POWER	ON	ON	ON
PLL POWER	PLLO # 1	PLLO # 1	PLLO # 1
ANTENNA IN WARM CAL POSITION MODE	NO	NO	NO
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO
ANTENNA IN NADIR POSITION MODE	NO	NO	NO
ANTENNA IN FULL SCAN MODE	YES	YES	YES
SURVIVAL HEATER POWER	OFF	OFF	OFF
MODULE POWER	CONNECT	CONNECT	CONNECT
COLD CAL POSITION MSB	ZERO	ZERO	ZERO
COLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA
DESCRIPTION

DESCRIPTION	VALUE	DEG C	VALUE	DEG C	VALUE	DEG C
A1-1 SCANNER MOTOR TEMPERATURE	213	16.6	213	16.6	214	18.0
A1-2 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0	214	18.0
A1-1 RF SHELF TEMPERATURE	215	19.4	215	19.4	215	19.4
A1-2 RF SHELF TEMPERATURE	216	20.7	216	20.7	216	20.7
A1-1 WARM LOAD TEMPERATURE	213	16.6	213	16.6	213	16.6
A1-2 WARM LOAD TEMPERATURE	214	18.0	214	18.0	214	18.0

DESCRIPTION	VALUE	AMPS/ VOLTS	VALUE	AMPS/ VOLTS	VALUE	AMPS/ VOLTS
A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	86	40.08	86	40.08	86	40.08
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	83	38.68	83	38.68	83	38.68
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	169	14.58	169	14.58	169	14.58
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	146	-15.25	146	-15.25	146	-15.25
RECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	145	4.83	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	144	4.80	144	4.80	144	4.80
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76	169	9.76
PHASE LOCK LOOP (CHANNEL 9/14)	145	14.58	145	14.58	145	14.58
PHASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30	145	-15.30
L.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 3)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 4)	171	9.84	171	9.84	171	9.84
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78	171	9.78
PLLO # 2 LOCK DETECT	1	0.02	1	0.02	1	0.02
PLLO # 1 LOCK DETECT	220	4.40	220	4.40	220	4.40
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	57.00	613	29.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

MSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 08:59:23 SCAN NUMBER 368
5] DIGITAL A DATA ELEMENT 0000
6] DIGITAL B DATA ELEMENT 00
7] ANALOG DATA ELEMENT 00

COMMANDS
9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL0 # 1 [18]
13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]
POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 3

PRE-HIGH FREQ. 2.86Hz MLB
3.2.4.2.1.4.3

TDs 51

NO: 748613 OA: 0810 1ST CPT
IN: 1331770-3-II SN: 101

(139/T)

TEST ENG: (092) DAT 11/20/99

FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	11111111	572	SCENE DATA	16402
2	SYNC SEQUENCE	11111111	574	BP	16500
3	SYNC SEQUENCE	11111111	576		16025
4	UNIT ID AND SERIAL NO	00100001	578		17325
5	DIGITAL B DATA	00000010	580		17097
6	DIGITAL B DATA	00001110	582		19902
7	DIGITAL B DATA	00000000	584		17807
8	DIGITAL B DATA	00000000	586		14916
10	REFLECTOR 1 POSITION	16225	588	REFLECTOR 1 POSITION	2598
12	REFLECTOR 2 POSITION	16225	590	REFLECTOR 2 POSITION	2417
14	REFL 1 POS	16225	592	REFL 1 POS	2601
16	REFL 2 POS	16205	594	REFL 2 POS	2420
18	SCENE DATA	16313	596	SCENE DATA	16192
20		17419	598		16313
22		16802	600		17427
24		16638	602		16819
26		16406	604		16657
28		16483	606		16413
30		15997	608		16494
32		17312	610		15999
34		17084	612		17327
36		19898	614		17095
38		17830	616		19893
40		14909	618		17826
42		16372	620		14918
44		173	622		2749
46		16375	624		2567
48		16210	626		2753
50		16304	628		2571
52		17413	630		16183
54		16801	632		16302
56		16643	634		17407
58		16395	636		16802
60		16487	638		16643
62		16000	640		16385
64		17312	642		16481
66		17093	644		16000
68		19801	646		17313
70		17811	648		17091
72		14909	650		19879
74		323	652		17816
76		144	654		14909
78		326	656		2899
80		148	658		2718
82		16183	660		2905
84		16298	662		2722
86		17406	664		16183
88		16811	666		16301
90			668		17405
92					16804

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16644	672	CH 7	16643
96	CH 8	16385	674	CH 8	16395
98	CH 9	16489	676	CH 9	16485
100	CH 10	16007	678	CH 10	15994
102	CH 11	17313	680	CH 11	17312
104	CH 12	17082	682	CH 12	17088
106	CH 13	19893	684	CH 13	19887
108	CH 14	17814	686	CH 14	17813
110	CH 15	14912	688	CH 15	14908
112	REFLECTOR 1 POSITION	475	690	REFLECTOR 1 POSITION 21	3052
114	REFLECTOR 2 POSITION	296	692	REFLECTOR 2 POSITION 21	2869
116	REFL 1 POS 4	478	694	REFL 1 POS 21	3056
118	REFL 2 POS 4	300	696	REFL 2 POS 21	2874
120	SCENE DATA BP 4	16185	698	SCENE DATA BP 21	16188
122	CH 3	16298	700	CH 3	16297
124	CH 4	17404	702	CH 4	17406
126	CH 5	16815	704	CH 5	16801
128	CH 6	16644	706	CH 6	16639
130	CH 7	16392	708	CH 7	16390
132	CH 8	16494	710	CH 8	16490
134	CH 9	16012	712	CH 9	16001
136	CH 10	17319	714	CH 10	17312
138	CH 11	17084	716	CH 11	17088
140	CH 12	19897	718	CH 12	19880
142	CH 13	17819	720	CH 13	17827
144	CH 14	14914	722	CH 14	14907
146	CH 15	626	724	CH 15	3202
148	REFLECTOR 1 POSITION	444	726	REFLECTOR 1 POSITION 22	3023
150	REFLECTOR 2 POSITION	631	728	REFLECTOR 2 POSITION 22	3206
152	REFL 1 POS 5	448	730	REFL 1 POS 22	3028
154	REFL 2 POS 5	16179	732	REFL 2 POS 22	16184
156	SCENE DATA BP 5	16299	734	SCENE DATA BP 22	16292
158	CH 3	17408	736	CH 3	17407
160	CH 4	16814	738	CH 4	16799
162	CH 5	16651	740	CH 5	16640
164	CH 6	16389	742	CH 6	16390
166	CH 7	16490	744	CH 7	16482
168	CH 8	16014	746	CH 8	15997
170	CH 9	17310	748	CH 9	17314
172	CH 10	17094	750	CH 10	17087
174	CH 11	19899	752	CH 11	19896
176	CH 12	17828	754	CH 12	17826
178	CH 13	14915	756	CH 13	14908
180	CH 14	778	758	CH 14	33351
182	REFLECTOR 1 POSITION	597	760	REFLECTOR 1 POSITION 23	3171
184	REFLECTOR 2 POSITION	781	762	REFLECTOR 2 POSITION 23	3358
186	REFL 1 POS 6	599	764	REFL 1 POS 23	3178
188	REFL 2 POS 6	16183	766	REFL 2 POS 23	16182
190	SCENE DATA BP 6	16297	768	SCENE DATA BP 23	16297
192	CH 3	17409	770	CH 3	17406

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16815	772	CH 6	16801
196	CH 7	16654	774	CH 7	16639
198	CH 8	16386	776	CH 8	16390
200	CH 9	16501	778	CH 9	16487
202	CH 10	16005	780	CH 10	15999
204	CH 11	17326	782	CH 11	17312
206	CH 12	17101	784	CH 12	17087
208	CH 13	19896	786	CH 13	19885
210	CH 14	17815	788	CH 14	17800
212	CH 15	14919	790	CH 15	14909
214	REFLECTOR 1 POSITION 7	929	792	REFLECTOR 1 POSITION 24	3505
216	REFLECTOR 2 POSITION 7	749	794	REFLECTOR 2 POSITION 24	3326
218	REFL 1 POS 7 2ND LOOK	933	796	REFL 1 POS 24 2ND LOOK	3508
220	REFL 2 POS 7 2ND LOOK	749	798	REFL 2 POS 24 2ND LOOK	3330
222	SCENE DATA BP 7	16187	800	SCENE DATA BP 24	16182
224	CH 3	16303	802	CH 3	16296
226	CH 4	17405	804	CH 4	17409
228	CH 5	16803	806	CH 5	16803
230	CH 6	16643	808	CH 6	16638
232	CH 7	16383	810	CH 7	16387
234	CH 8	16486	812	CH 8	16483
236	CH 9	15993	814	CH 9	15999
238	CH 10	17315	816	CH 10	17311
240	CH 11	17082	818	CH 11	17093
242	CH 12	19891	820	CH 12	19890
244	CH 13	17795	822	CH 13	17818
246	CH 14	14909	824	CH 14	14907
248	CH 15	11080	826	CH 15	3655
250	REFLECTOR 1 POSITION 8	1898	828	REFLECTOR 1 POSITION 25	3476
252	REFLECTOR 2 POSITION 8	1084	830	REFLECTOR 2 POSITION 25	3658
254	REFL 1 POS 8 2ND LOOK	903	832	REFL 1 POS 25 2ND LOOK	3481
256	REFL 2 POS 8 2ND LOOK	16179	834	REFL 2 POS 25 2ND LOOK	16174
258	SCENE DATA BP 8	16301	836	SCENE DATA BP 25	16298
260	CH 3	17410	838	CH 3	17405
262	CH 4	16803	840	CH 4	16802
264	CH 5	16642	842	CH 5	16637
266	CH 6	16391	844	CH 6	16389
268	CH 7	16495	846	CH 7	16482
270	CH 8	16003	848	CH 8	16000
272	CH 9	17309	850	CH 9	17314
274	CH 10	17095	852	CH 10	17088
276	CH 11	19903	854	CH 11	19894
278	CH 12	17823	856	CH 12	17828
280	CH 13	14911	858	CH 13	14907
282	CH 14	12333	860	CH 14	3806
284	CH 15	10533	862	CH 15	3627
286	REFLECTOR 1 POSITION 9	12336	864	REFLECTOR 1 POSITION 26	3811
288	REFLECTOR 2 POSITION 9	1054	866	REFLECTOR 2 POSITION 26	3632
290	REFL 1 POS 9 2ND LOOK	16181	868	REFL 1 POS 26 2ND LOOK	16200
292	REFL 2 POS 9 2ND LOOK	16303	870	REFL 2 POS 26 2ND LOOK	16304
	SCENE DATA BP 9			SCENE DATA BP 26	

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17413	872	CH 5	17407
296	CH 6	16803	874	CH 6	16802
298	CH 7	16641	876	CH 7	16643
300	CH 8	16393	878	CH 8	16393
302	CH 9	16488	880	CH 9	16487
304	CH 10	16004	882	CH 10	15999
306	CH 11	17311	884	CH 11	17313
308	CH 12	17090	886	CH 12	17085
310	CH 13	19882	888	CH 13	19876
312	CH 14	17832	890	CH 14	17826
314	CH 15	14909	892	CH 15	14909
316	REFLECTOR 1 POSITION 10	1384	894	REFLECTOR 1 POSITION 27	3970
318	REFLECTOR 2 POSITION 10	1205	896	REFLECTOR 2 POSITION 27	3782
320	REFL 1 POS 10 2ND LOOK	1389	898	REFL 1 POS 27 2ND LOOK	3971
322	REFL 2 POS 10 2ND LOOK	1205	900	REFL 2 POS 27 2ND LOOK	3785
324	SCENE DATA BP 10	16190	902	SCENE DATA BP 27	16176
326	CH 3	16300	904	CH 3	16305
328	CH 4	17407	906	CH 4	17416
330	CH 5	16804	908	CH 5	16802
332	CH 6	16639	910	CH 6	16642
334	CH 7	16392	912	CH 7	16390
336	CH 8	16486	914	CH 8	16482
338	CH 9	15997	916	CH 9	16000
340	CH 10	17316	918	CH 10	17310
342	CH 11	17095	920	CH 11	17085
344	CH 12	19878	922	CH 12	19894
346	CH 13	17822	924	CH 13	17825
348	CH 14	14909	926	CH 14	14907
350	CH 15	1535	928	CH 15	4110
352	REFLECTOR 1 POSITION 11	1357	930	REFLECTOR 1 POSITION 28	3937
354	REFLECTOR 2 POSITION 11	1539	932	REFLECTOR 2 POSITION 28	4114
356	REFL 1 POS 11 2ND LOOK	1357	934	REFL 1 POS 28 2ND LOOK	3936
358	REFL 2 POS 11 2ND LOOK	16168	936	REFL 2 POS 28 2ND LOOK	16166
360	SCENE DATA BP 11	16299	938	SCENE DATA BP 28	16304
362	CH 3	17412	940	CH 3	17411
364	CH 4	16803	942	CH 4	16801
366	CH 5	16642	944	CH 5	16641
368	CH 6	16394	946	CH 6	16387
370	CH 7	16486	948	CH 7	16483
372	CH 8	16004	950	CH 8	15998
374	CH 9	17311	952	CH 9	17312
376	CH 10	17084	954	CH 10	17081
378	CH 11	19884	956	CH 11	19889
380	CH 12	17813	958	CH 12	17822
382	CH 13	14909	960	CH 13	14909
384	CH 14	1687	962	CH 14	4259
386	CH 15	1507	964	CH 15	4084
388	REFLECTOR 1 POSITION 12	1691	966	REFLECTOR 1 POSITION 29	4268
390	REFLECTOR 2 POSITION 12	1509	968	REFLECTOR 2 POSITION 29	4087
392	REFL 1 POS 12 2ND LOOK	16200	970	REFL 1 POS 29 2ND LOOK	16137
	REFL 2 POS 12 2ND LOOK			REFL 2 POS 29 2ND LOOK	
	SCENE DATA BP 12			SCENE DATA BP 29	

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16300	972	CH 4	16325
396	CH 5	17407	974	CH 5	17436
398	CH 6	16802	976	CH 6	16806
400	CH 7	16640	978	CH 7	16638
402	CH 8	16392	980	CH 8	16431
404	CH 9	16487	982	CH 9	16487
406	CH 10	16002	984	CH 10	15998
408	CH 11	17312	986	CH 11	17311
410	CH 12	17091	988	CH 12	17083
412	CH 13	19890	990	CH 13	19884
414	CH 14	17842	992	CH 14	17822
416	CH 15	14908	994	CH 15	14908
418	REFLECTOR 1 POSITION 13	18339	996	REFLECTOR 1 POSITION 30	4419
420	REFLECTOR 2 POSITION 13	1659	998	REFLECTOR 2 POSITION 30	4237
422	REFL 1 POS 13	1843	1000	REFL 1 POS 30	4421
424	REFL 2 POS 13	1661	1002	REFL 2 POS 30	4240
426	SCENE DATA BP 13	16172	1004	SCENE DATA BP 30	16213
428	CH 3	16310	1006	CH 3	16314
430	CH 4	17413	1008	CH 4	17415
432	CH 5	16819	1010	CH 5	16805
434	CH 6	16654	1012	CH 6	16643
436	CH 7	16402	1014	CH 7	16394
438	CH 8	16500	1016	CH 8	16484
440	CH 9	16004	1018	CH 9	15999
442	CH 10	17326	1020	CH 10	17310
444	CH 11	17101	1022	CH 11	17086
446	CH 12	19904	1024	CH 12	19886
448	CH 13	17814	1026	CH 13	17811
450	CH 14	14918	1028	CH 14	14909
452	CH 15	1989	1030	CH 15	6016
454	REFLECTOR 1 POSITION 14	1808	1032	REFLECTOR 1 COLD CAL POS	5833
456	REFLECTOR 2 POSITION 14	1995	1034	REFLECTOR 2 COLD CAL POS	6016
458	REFL 1 POS 14	1812	1036	REFL 1 COLD CAL 2ND LOOK	5833
460	REFL 2 POS 14	16169	1038	REFL 2 COLD CAL 2ND LOOK	16222
462	SCENE DATA BP 14	16307	1040	COLD CAL DATA 1	16306
464	CH 3	17423	1042	CH 3	17414
466	CH 4	16813	1044	CH 4	16801
468	CH 5	16654	1046	CH 5	16643
470	CH 6	16388	1048	CH 6	16399
472	CH 7	16495	1050	CH 7	16482
474	CH 8	16019	1052	CH 8	16001
476	CH 9	17323	1054	CH 9	17307
478	CH 10	17090	1056	CH 10	17080
480	CH 11	19898	1058	CH 11	19877
482	CH 12	17819	1060	CH 12	17825
484	CH 13	14915	1062	CH 13	14907
486	CH 14	2143	1064	CH 14	16221
488	REFLECTOR 1 POSITION 15	1963	1066	REFLECTOR 1 COLD CAL DATA 2	16307
490	REFLECTOR 2 POSITION 15	2146	1068	REFLECTOR 2 COLD CAL DATA 2	17414
492	REFL 1 POS 15	1964	1070	REFL 1 POS 30	16804
	REFL 2 POS 15	2146		REFL 2 POS 30	
	SCENE DATA BP 15			SCENE DATA BP 30	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	
	CH 7			CH 7	
	CH 8			CH 8	
	CH 9			CH 9	
	CH 10			CH 10	
	CH 11			CH 11	
	CH 12			CH 12	
	CH 13			CH 13	
	CH 14			CH 14	
	CH 15			CH 15	
	REFLECTOR 1 POSITION 30			REFLECTOR 1 POSITION 30	
	REFLECTOR 2 POSITION 30			REFLECTOR 2 POSITION 30	
	REFL 1 POS 30			REFL 1 POS 30	
	REFL 2 POS 30			REFL 2 POS 30	
	SCENE DATA BP 30			SCENE DATA BP 30	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	
	CH 7			CH 7	
	CH 8			CH 8	
	CH 9			CH 9	
	CH 10			CH 10	
	CH 11			CH 11	
	CH 12			CH 12	
	CH 13			CH 13	
	CH 14			CH 14	
	CH 15			CH 15	
	REFLECTOR 1 COLD CAL POS			REFLECTOR 1 COLD CAL POS	
	REFLECTOR 2 COLD CAL POS			REFLECTOR 2 COLD CAL POS	
	REFL 1 COLD CAL 2ND LOOK			REFL 1 COLD CAL 2ND LOOK	
	REFL 2 COLD CAL 2ND LOOK			REFL 2 COLD CAL 2ND LOOK	
	COLD CAL DATA 1			COLD CAL DATA 1	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	
	CH 7			CH 7	
	CH 8			CH 8	
	CH 9			CH 9	
	CH 10			CH 10	
	CH 11			CH 11	
	CH 12			CH 12	
	CH 13			CH 13	
	CH 14			CH 14	
	CH 15			CH 15	
	COLD CAL DATA 2			COLD CAL DATA 2	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	16200	1072	CH 7	16639
496		16317	1074	CH 8	16398
498		17417	1076	CH 9	16484
500		16819	1078	CH 10	15998
502		16662	1080	CH 11	17315
504		16400	1082	CH 12	17089
506		16502	1084	CH 13	19896
508		16007	1086	CH 14	17819
510		17324	1088	CH 15	14908
512		17102	1182	REFLECTOR 1 WARM CAL POS	10416
514		19881	1184	REFLECTOR 2 WARM CAL POS	10233
516		17815	1186	REFL 1 WARM CAL 2ND LOOK	10415
518		14918	1188	REFL 2 WARM CAL 2ND LOOK	10233
520	REFLECTOR 1 POSITION 16	2293	1190	WARM CAL DATA 1	16179
522	REFLECTOR 2 POSITION 16	2114	1192		16294
524	REFL 1 POS 16 2ND LOOK	2298	1194		17398
526	REFL 2 POS 16 2ND LOOK	2115	1196		16795
528	SCENE DATA BP 16	16232	1198		16632
530		16328	1200		16380
532		17423	1202		16477
534		16812	1204		15990
536		16658	1206		17305
538		16401	1208		17076
540		16499	1210		19876
542		16001	1212		17792
544		17331	1214		14903
546		17095	1216		16175
548		19879	1218		16290
550		17831	1220		17402
552		14914	1222		16792
554	REFLECTOR 1 POSITION 17	2444	1224		16628
556	REFLECTOR 2 POSITION 17	2261	1226		16382
558	REFL 1 POS 17 2ND LOOK	2449	1228		16478
560	REFL 2 POS 17 2ND LOOK	2265	1230		15991
562	SCENE DATA BP 17	16179	1232		17306
564		16305	1234		17066
566		17430	1236		19871
568		16819	1238		17820
570		16650	1240		14902
				WARM CAL DATA 2	

LEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
090	SCAN MOTOR A1-1	17470	22.58	
092	SCAN MOTOR A1-2	18208	22.80	
094	FEEDHORN A1-1	18566	24.08	
096	FEEDHORN A1-2	19158	25.25	
098	RF MUX A1-1	19606	25.62	
100	RF MUX A1-2	20276	26.92	
102	LOCAL OSCILLATOR CHANNEL 3	21019	28.26	
104	LOCAL OSCILLATOR CHANNEL 4	20986	27.89	
106	LOCAL OSCILLATOR CHANNEL 5	20780	28.01	
108	LOCAL OSCILLATOR CHANNEL 6	19405	25.59	
110	LOCAL OSCILLATOR CHANNEL 7	19935	26.39	
112	LOCAL OSCILLATOR CHANNEL 8	20187	27.78	
114	LOCAL OSCILLATOR CHANNEL 15	20858	27.61	
116	PLL LO #2 CHANNELS 9 THROUGH 14	19534	25.52	
118	PLL LO #1 CHANNELS 9 THROUGH 14	21490	29.23	
120	SPARE (NOT USED)	32767	51.27	
122	MIXER/IF AMPLIFIER CHANNEL 3	20931	27.29	
124	MIXER/IF AMPLIFIER CHANNEL 4	20925	27.48	
126	MIXER/IF AMPLIFIER CHANNEL 5	20615	27.27	
128	MIXER/IF AMPLIFIER CHANNEL 6	19774	26.02	
130	MIXER/IF AMPLIFIER CHANNEL 7	19815	26.34	
132	MIXER/IF AMPLIFIER CHANNEL 8	20717	27.40	
134	MIXER/IF AMPLIFIER CH 9 THRU 14	19835	25.64	
136	MIXER/IF AMPLIFIER CHANNEL 15	20354	27.59	
138	IF AMPLIFIER CHANNEL 11 THRU 14	20371	27.21	
140	IF AMPLIFIER CHANNEL 9	20390	27.30	
142	IF AMPLIFIER CHANNEL 10	20554	27.31	
144	IF AMPLIFIER CHANNEL 11	19513	25.63	
146	DC/DC CONVERTER	20858	28.08	
148	IF AMPLIFIER CHANNEL 13	19544	25.66	
150	IF AMPLIFIER CHANNEL 14	19658	25.98	
152	IF AMPLIFIER CHANNEL 12	19438	25.57	
154	RF SHELF A1-1	19415	26.38	
156	RF SHELF A1-2	20106	26.86	
158	DETECTOR/PREAMPLIFIER ASSEMBLY	18659	24.31	
160	A1-1 WARM LOAD 1	22990	22.34	
162	A1-1 WARM LOAD 2	22748	22.29	
164	A1-1 WARM LOAD 3	22973	22.35	
166	A1-1 WARM LOAD 4	22913	22.31	
168	A1-1 WARM LOAD CENTER	22991	22.44	
170	A1-2 WARM LOAD 1	23080	22.93	
172	A1-2 WARM LOAD 2	23233	22.86	
174	A1-2 WARM LOAD 3	23384	22.99	
176	A1-2 WARM LOAD 4	23165	22.99	
178	A1-2 WARM LOAD CENTER	23070	22.92	
180	TEMP SENSOR REFERENCE VOLTAGE	25318		

DESCRIPTION

STATUS

STATUS

STATUS

CANNER A1-1 POWER	ON		ON	
CANNER A1-2 POWER	ON		ON	
LL POWER	PLLO # 1		PLLO # 1	PLLO # 1
NTENNA IN WARM CAL POSITION MODE	NO		NO	NO
NTENNA IN COLD CAL POSITION MODE	NO		NO	NO
NTENNA IN NADIR POSITION MODE	NO		NO	NO
NTENNA IN FULL SCAN MODE	YES		YES	YES
ORVIVAL HEATER POWER	OFF		OFF	OFF
ODULE POWER	CONNECT		CONNECT	CONNECT
OLD CAL POSITION MSB	ZERO		ZERO	ZERO
OLD CAL POSITION LSB	ZERO		ZERO	ZERO

ANALOG DATA

DESCRIPTION

VALUE

DEG C

VALUE

DEG C

1-1 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0
1-2 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0
1-1 RF SHELF TEMPERATURE	215	19.4	215	19.4
1-2 RF SHELF TEMPERATURE	217	22.1	217	22.1
1-1 WARM LOAD TEMPERATURE	213	16.6	213	16.6
1-2 WARM LOAD TEMPERATURE	214	18.0	214	18.0

DESCRIPTION

VALUE

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	87	40.54	87	40.54
1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	84	39.14	84	39.14
IGNAL PROCESSING +15 VDC	170	14.67	170	14.67
IGNAL PROCESSING -15 VDC	149	14.67	149	14.67
NTENNA DRIVE -15 VDC	147	-15.20	147	-15.20
ECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85
IGNAL PROCESSOR +5 VDC	145	4.83	145	4.83
NTENNA DRIVE +5 VDC	145	4.83	145	4.83
ECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76
HASE LOCK LOOP (CHANNEL 9/14)	169	14.58	169	14.58
HASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30
.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78
.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78
.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84
.O. VOLTAGE (CHANNEL 3)	171	9.78	171	9.78
.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84
.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78
LLO # 2 LOCK DETECT	1	0.02	1	0.02
LLO # 1 LOCK DETECT	219	4.38	219	4.38
.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67

PRT TEMPERATURES

ARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

IXED TARGET

ASEPLATE

THERMOCOUPLE TEMPERATURES

IXED TARGET SHROUD

ARIABLE TARGET SHROUD

IXED TARGET N2

ARIABLE TARGET N2

EATER N2

IXED TARGET FLOW METER

ARIABLE TARGET FLOW METER

ASEPLATE HEATER N2

ASEPLATE N2

ASEPLATE FLOW METER

DJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

AMSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 09:03:42 SCAN NUMBER 400
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

COMMANDS
[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL0 # 1 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]
POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 3

Post-High Freq. 2.86 Hz MLB
3.24214.3.

TDS 51

910: 748613 OP: 0810 1st CPT
P/N: 1334720-3-II SN: 102



TEST ENG: 11/24/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	11111111	572	SCENE DATA	16390
2	SYNC SEQUENCE	11111111	574	BP	16475
3	SYNC SEQUENCE	11111111	576		16009
4	UNIT ID AND SERIAL NO	00100001	578		17333
5	DIGITAL B DATA	00000010	580		17084
6	DIGITAL B DATA	00001110	582		19889
7	DIGITAL B DATA	00000000	584		17830
8	DIGITAL B DATA	00000000	586		14882
10	REFLECTOR 1 POSITION	16225	588	REFLECTOR 1 POSITION	2597
12	REFLECTOR 2 POSITION	16225	590	REFLECTOR 2 POSITION	2416
14	REFL 1 POS	16225	592	REFL 1 POS	2601
16	REFL 2 POS	16225	594	REFL 2 POS	2419
18	SCENE DATA	16189	596	SCENE DATA	16182
20		16287	598		16283
22		17397	600		17410
24		16780	602		16797
26		16622	604		16640
28		16390	606		16389
30		16463	608		16472
32		15981	610		15981
34		17311	612		17321
36		17077	614		17072
38		19867	616		19864
40		17826	618		17836
42		14874	620		14885
44	REFLECTOR 1 POSITION	167	622	REFLECTOR 1 POSITION	2748
46	REFLECTOR 2 POSITION	16373	624	REFLECTOR 2 POSITION	2567
48	REFL 1 POS	173	626	REFL 1 POS	2753
50	REFL 2 POS	16375	628	REFL 2 POS	2571
52	SCENE DATA	16201	630	SCENE DATA	16165
54		16281	632		16274
56		17393	634		17390
58		16784	636		16780
60		16626	638		16624
62		16378	640		16370
64		16463	642		16465
66		15981	644		15980
68		17315	646		17312
70		17081	648		17077
72		19883	650		19885
74		17812	652		17827
76		14875	654		14875
78	REFLECTOR 1 POSITION	323	656	REFLECTOR 1 POSITION	2898
80	REFLECTOR 2 POSITION	144	658	REFLECTOR 2 POSITION	2718
82	REFL 1 POS	326	660	REFL 1 POS	2904
84	REFL 2 POS	148	662	REFL 2 POS	2722
86	SCENE DATA	16158	664	SCENE DATA	16169
88		16270	666		16270
90		17389	668		17388
92		16787	670		16782

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16627	672	CH 7	16625
96	CH 8	16370	674	CH 8	16368
98	CH 9	16461	676	CH 9	16465
100	CH 10	15986	678	CH 10	15981
102	CH 11	17309	680	CH 11	17316
104	CH 12	17076	682	CH 12	17078
106	CH 13	19871	684	CH 13	19869
108	CH 14	17823	686	CH 14	17829
110	CH 15	14878	688	CH 15	14875
112	REFLECTOR 1 POSITION	476	690	REFLECTOR 1 POSITION 21	3051
114	REFLECTOR 2 POSITION	297	692	REFLECTOR 2 POSITION 21	2870
116	REFL 1 POS 4	478	694	REFL 1 POS 21 2ND LOOK	3056
118	REFL 2 POS 4	300	696	REFL 2 POS 21 2ND LOOK	2874
120	SCENE DATA BP 4	16172	698	SCENE DATA BP 21	16171
122	CH 3	16266	700	CH 3	16270
124	CH 4	17388	702	CH 4	17390
126	CH 5	16797	704	CH 5	16780
128	CH 6	16628	706	CH 6	16626
130	CH 7	16370	708	CH 7	16368
132	CH 8	16472	710	CH 8	16466
134	CH 9	15994	712	CH 9	15982
136	CH 10	17322	714	CH 10	17318
138	CH 11	17087	716	CH 11	17083
140	CH 12	19868	718	CH 12	19874
142	CH 13	17822	720	CH 13	17838
144	CH 14	14881	722	CH 14	14874
146	CH 15	626	724	CH 15	3201
148	REFLECTOR 1 POSITION	444	726	REFLECTOR 1 POSITION 22	3023
150	REFLECTOR 2 POSITION	632	728	REFLECTOR 2 POSITION 22	3025
152	REFL 1 POS 5	449	730	REFL 1 POS 22 2ND LOOK	3027
154	REFL 2 POS 5	16164	732	REFL 2 POS 22 2ND LOOK	16165
156	SCENE DATA BP 5	16270	734	SCENE DATA BP 22	16271
158	CH 3	17393	736	CH 3	17387
160	CH 4	16793	738	CH 4	16780
162	CH 5	16634	740	CH 5	16626
164	CH 6	16370	742	CH 6	16369
166	CH 7	16467	744	CH 7	16466
168	CH 8	15998	746	CH 8	15977
170	CH 9	17318	748	CH 9	17315
172	CH 10	17089	750	CH 10	17076
174	CH 11	19865	752	CH 11	19871
176	CH 12	17831	754	CH 12	17824
178	CH 13	14880	756	CH 13	14876
180	CH 14	777	758	CH 14	3351
182	REFLECTOR 1 POSITION	596	760	REFLECTOR 1 POSITION 23	3171
184	REFLECTOR 2 POSITION	781	762	REFLECTOR 2 POSITION 23	3357
186	REFL 1 POS 6	598	764	REFL 1 POS 23 2ND LOOK	3177
188	REFL 2 POS 6	16167	766	REFL 2 POS 23 2ND LOOK	16170
190	SCENE DATA BP 6	16270	768	SCENE DATA BP 23	16275
192	CH 3	17387	770	CH 3	17388
	CH 4			CH 4	
	CH 5			CH 5	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16797	772	CH 6	16780
196	CH 7	16642	774	CH 7	16624
198	CH 8	16373	776	CH 8	16369
200	CH 9	16479	778	CH 9	16462
202	CH 10	15988	780	CH 10	15982
204	CH 11	17325	782	CH 11	17310
206	CH 12	17077	784	CH 12	17075
208	CH 13	19870	786	CH 13	19866
210	CH 14	17839	788	CH 14	17827
212	CH 15	14886	790	CH 15	14875
214	REFLECTOR 1 POSITION	929	792	REFLECTOR 1 POSITION 24	3504
216	REFLECTOR 2 POSITION	749	794	REFLECTOR 2 POSITION 24	3325
218	REFL 1 POS 7	933	796	REFL 1 POS 24	3508
220	REFL 2 POS 7	749	798	REFL 2 POS 24	3330
222	SCENE DATA BP 7	16172	800	SCENE DATA BP 24	16170
224	CH 3	16273	802	CH 3	16271
226	CH 4	17388	804	CH 4	17380
228	CH 5	16783	806	CH 5	16780
230	CH 6	16624	808	CH 6	16622
232	CH 7	16367	810	CH 7	16369
234	CH 8	16466	812	CH 8	16463
236	CH 9	15975	814	CH 9	15986
238	CH 10	17310	816	CH 10	17315
240	CH 11	17079	818	CH 11	17076
242	CH 12	19877	820	CH 12	19876
244	CH 13	17817	822	CH 13	17805
246	CH 14	14875	824	CH 14	14874
248	CH 15	10799	826	CH 15	3653
250	REFLECTOR 1 POSITION	899	828	REFLECTOR 1 POSITION 25	3476
252	REFLECTOR 2 POSITION	1084	830	REFLECTOR 2 POSITION 25	3659
254	REFL 1 POS 8	903	832	REFL 1 POS 25	3480
256	REFL 2 POS 8	16161	834	REFL 2 POS 25	16166
258	SCENE DATA BP 8	16272	836	SCENE DATA BP 25	16271
260	CH 3	17393	838	CH 3	17383
262	CH 4	16782	840	CH 4	16783
264	CH 5	16627	842	CH 5	16625
266	CH 6	16369	844	CH 6	16369
268	CH 7	16465	846	CH 7	16464
270	CH 8	15982	848	CH 8	15981
272	CH 9	17314	850	CH 9	17315
274	CH 10	17080	852	CH 10	17073
276	CH 11	19878	854	CH 11	19872
278	CH 12	17842	856	CH 12	17818
280	CH 13	14877	858	CH 13	14875
282	CH 14	12333	860	CH 14	3804
284	CH 15	1052	862	CH 15	3627
286	REFLECTOR 1 POSITION	1236	864	REFLECTOR 1 POSITION 26	3811
288	REFLECTOR 2 POSITION	1054	866	REFLECTOR 2 POSITION 26	3632
290	REFL 1 POS 9	16170	868	REFL 1 POS 26	16185
292	REFL 2 POS 9	16274	870	REFL 2 POS 26	16273
	SCENE DATA BP 9			SCENE DATA BP 26	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17392	872	CH 5	17392
296	CH 6	16785	874	CH 6	16781
298	CH 7	16625	876	CH 7	16626
300	CH 8	16373	878	CH 8	16370
302	CH 9	16464	880	CH 9	16464
304	CH 10	15978	882	CH 10	15978
306	CH 11	17314	884	CH 11	17317
308	CH 12	17078	886	CH 12	17075
310	CH 13	19884	888	CH 13	19868
312	CH 14	17829	890	CH 14	17835
314	CH 15	14875	892	CH 15	14875
316	REFLECTOR 1 POSITION 10	1384	894	REFLECTOR 1 POSITION 27	3970
318	REFLECTOR 2 POSITION 10	1203	896	REFLECTOR 2 POSITION 27	3779
320	REFL 1 POS 10 2ND LOOK	1389	898	REFL 1 POS 27 2ND LOOK	3971
322	REFL 2 POS 10 2ND LOOK	1205	900	REFL 2 POS 27 2ND LOOK	3785
324	SCENE DATA BP 10	16176	902	SCENE DATA BP 27	16156
326	CH 3	16277	904	CH 3	16276
328	CH 4	17390	906	CH 4	17394
330	CH 5	16782	908	CH 5	16778
332	CH 6	16626	910	CH 6	16624
334	CH 7	16374	912	CH 7	16370
336	CH 8	16465	914	CH 8	16466
338	CH 9	15983	916	CH 9	15981
340	CH 10	17309	918	CH 10	17313
342	CH 11	17077	920	CH 11	17077
344	CH 12	19870	922	CH 12	19853
346	CH 13	17827	924	CH 13	17818
348	CH 14	14875	926	CH 14	14874
350	CH 15	1534	928	CH 15	4111
352	REFLECTOR 1 POSITION 11	1355	930	REFLECTOR 1 POSITION 28	3935
354	REFL 1 POS 11 2ND LOOK	1540	932	REFL 1 POS 28 2ND LOOK	4114
356	REFL 2 POS 11 2ND LOOK	1357	934	REFL 2 POS 28 2ND LOOK	3936
358	SCENE DATA BP 11	16153	936	SCENE DATA BP 28	16150
360	CH 3	16270	938	CH 3	16278
362	CH 4	17393	940	CH 4	17394
364	CH 5	16780	942	CH 5	16783
366	CH 6	16627	944	CH 6	16622
368	CH 7	16371	946	CH 7	16369
370	CH 8	16464	948	CH 8	16462
372	CH 9	15981	950	CH 9	15982
374	CH 10	17319	952	CH 10	17322
376	CH 11	17075	954	CH 11	17073
378	CH 12	19864	956	CH 12	19879
380	CH 13	17802	958	CH 13	17818
382	CH 14	14875	960	CH 14	14876
384	CH 15	1587	962	CH 15	4261
386	REFLECTOR 1 POSITION 12	1508	964	REFLECTOR 1 POSITION 29	4083
388	REFL 1 POS 12 2ND LOOK	1691	966	REFL 1 POS 29 2ND LOOK	4267
390	REFL 2 POS 12 2ND LOOK	1509	968	REFL 2 POS 29 2ND LOOK	4088
392	SCENE DATA BP 12	16182	970	SCENE DATA BP 29	16121

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16274	972	CH 4	16299
396	CH 5	17387	974	CH 5	17419
398	CH 6	16782	976	CH 6	16781
400	CH 7	16625	978	CH 7	16624
402	CH 8	16372	980	CH 8	16410
404	CH 9	16464	982	CH 9	16462
406	CH 10	15984	984	CH 10	15976
408	CH 11	17318	986	CH 11	17312
410	CH 12	17073	988	CH 12	17074
412	CH 13	19871	990	CH 13	19862
414	CH 14	17823	992	CH 14	17841
416	CH 15	14876	994	CH 15	14874
418	REFLECTOR 1 POSITION 13	1840	996	REFLECTOR 1 POSITION 30	4419
420	REFLECTOR 2 POSITION 13	1658	998	REFLECTOR 2 POSITION 30	4234
422	REFL 1 POS 13 2ND LOOK	1843	1000	REFL 1 POS 30 2ND LOOK	4421
424	REFL 2 POS 13 2ND LOOK	1660	1002	REFL 2 POS 30 2ND LOOK	4239
426	SCENE DATA BP 13	16160	1004	SCENE DATA BP 30	16201
428	CH 3	16280	1006	CH 3	16290
430	CH 4	17394	1008	CH 4	17396
432	CH 5	16794	1010	CH 5	16779
434	CH 6	16638	1012	CH 6	16624
436	CH 7	16379	1014	CH 7	16380
438	CH 8	16482	1016	CH 8	16462
440	CH 9	15985	1018	CH 9	15987
442	CH 10	17328	1020	CH 10	17316
444	CH 11	17092	1022	CH 11	17073
446	CH 12	19900	1024	CH 12	19879
448	CH 13	17828	1026	CH 13	17812
450	CH 14	14884	1028	CH 14	14875
452	CH 15	1989	1030	CH 15	6017
454	REFLECTOR 1 POSITION 14	1809	1032	REFLECTOR 1 COLD CAL POS	5834
456	REFLECTOR 2 POSITION 14	1809	1034	REFLECTOR 2 COLD CAL POS	5834
458	REFL 1 POS 14 2ND LOOK	1994	1036	REFL 1 COLD CAL 2ND LOOK	6017
460	REFL 2 POS 14 2ND LOOK	1812	1038	REFL 2 COLD CAL 2ND LOOK	5833
462	SCENE DATA BP 14	16157	1040	COLD CAL DATA 1	16206
464	CH 3	16275	1042	CH 3	16276
466	CH 4	17400	1044	CH 4	17398
468	CH 5	16795	1046	CH 5	16781
470	CH 6	16638	1048	CH 6	16626
472	CH 7	16476	1050	CH 7	16382
474	CH 8	16001	1052	CH 8	16463
476	CH 9	17320	1054	CH 9	15984
478	CH 10	17075	1056	CH 10	17314
480	CH 11	19882	1058	CH 11	17069
482	CH 12	17844	1060	CH 12	19871
484	CH 13	14882	1062	CH 13	17805
486	CH 14	2144	1064	CH 14	14873
488	CH 15	1964	1066	CH 15	16211
490	REFLECTOR 1 POSITION 15	2146	1068	REFLECTOR 1 COLD CAL POS	16284
492	REFLECTOR 2 POSITION 15	2146	1070	REFLECTOR 2 COLD CAL POS	17396
	REFL 1 POS 15 2ND LOOK			REFL 1 COLD CAL 2ND LOOK	16780
	REFL 2 POS 15 2ND LOOK			REFL 2 COLD CAL 2ND LOOK	
	SCENE DATA BP 15			COLD CAL DATA 1	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	16183	1072		16626
496		16285	1074		16382
498		17401	1076		16465
500		16797	1078		15982
502		16645	1080		17314
504		16380	1082		17080
506		16479	1084		19876
508		15989	1086		17827
510		17326	1088		14874
512		17081	1182	REFLECTOR 1 WARM CAL POS	10416
514		19877	1184	REFLECTOR 2 WARM CAL POS	10232
516		17846	1186	REFL 1 WARM CAL 2ND LOOK	10416
518		14884	1188	REFL 2 WARM CAL 2ND LOOK	10232
520	REFLECTOR 1 POSITION 16	2294	1190	WARM CAL DATA 1	16159
522	REFLECTOR 2 POSITION 16	2111	1192		16264
524	REFL 1 POS 16 2ND LOOK	2298	1194		17383
526	REFL 2 POS 16 2ND LOOK	2115	1196		16769
528	SCENE DATA BP 16	16218	1198		16614
530		16300	1200		16361
532		17406	1202		16457
534		16794	1204		15970
536		16639	1206		17304
538		16387	1208		17066
540		16478	1210		19847
542		15987	1212		17792
544		17324	1214		14869
546		19869	1216		16157
548		17839	1218		16264
550		14879	1220		17380
552		2444	1222		16616
554	REFLECTOR 1 POSITION 17	2261	1224		16359
556	REFLECTOR 2 POSITION 17	2449	1226		16455
558	REFL 1 POS 17 2ND LOOK	2265	1228		15970
560	REFL 2 POS 17 2ND LOOK	16170	1230		17305
562	SCENE DATA BP 17	16278	1232		17069
564		17405	1234		19862
566		16795	1236		17822
568		16631	1238		14869
570			1240		

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
1090	SCAN MOTOR A1-1	17509	22.65	
1092	SCAN MOTOR A1-2	18263	22.90	
1094	FEEDHORN A1-1	18618	24.18	
1096	FEEDHORN A1-2	19227	25.38	
1098	RF MUX A1-1	19745	25.88	
1100	RF MUX A1-2	20424	27.20	
1102	LOCAL OSCILLATOR CHANNEL 3	21351	28.89	
1104	LOCAL OSCILLATOR CHANNEL 4	21345	28.57	
1106	LOCAL OSCILLATOR CHANNEL 5	21081	28.58	
1108	LOCAL OSCILLATOR CHANNEL 6	19654	26.07	
1110	LOCAL OSCILLATOR CHANNEL 7	20155	26.81	
1112	LOCAL OSCILLATOR CHANNEL 8	20485	28.34	
1114	LOCAL OSCILLATOR CHANNEL 15	21154	28.16	
1116	PLL LO #2 CHANNELS 9 THROUGH 14	19579	25.60	
1118	PLL LO #1 CHANNELS 9 THROUGH 14	22046	30.29	
1120	SPARE (NOT USED)	32767	51.27	
1122	MIXER/IF AMPLIFIER CHANNEL 3	21092	27.59	
1124	MIXER/IF AMPLIFIER CHANNEL 4	21090	27.79	
1126	MIXER/IF AMPLIFIER CHANNEL 5	20775	27.57	
1128	MIXER/IF AMPLIFIER CHANNEL 6	19931	26.32	
1130	MIXER/IF AMPLIFIER CHANNEL 7	19967	26.63	
1132	MIXER/IF AMPLIFIER CHANNEL 8	20898	27.75	
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	19932	25.82	
1136	MIXER/IF AMPLIFIER CHANNEL 15	20649	28.15	
1138	IF AMPLIFIER CHANNEL 11 THRU 14	20611	27.66	
1140	IF AMPLIFIER CHANNEL 9	20631	27.75	
1142	IF AMPLIFIER CHANNEL 10	20793	27.77	
1144	IF AMPLIFIER CHANNEL 11	19664	25.92	
1146	DC/DC CONVERTER	21283	28.88	
1148	IF AMPLIFIER CHANNEL 13	19690	25.94	
1150	IF AMPLIFIER CHANNEL 14	19802	26.25	
1152	IF AMPLIFIER CHANNEL 12	19585	25.85	
1154	RF SHELF A1-1	19627	26.78	
1156	RF SHELF A1-2	20280	27.19	
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	18718	24.42	
1160	A1-1 WARM LOAD 1	23011	22.38	
1162	A1-1 WARM LOAD 2	22772	22.33	
1164	A1-1 WARM LOAD 3	22998	22.40	
1166	A1-1 WARM LOAD 4	22937	22.36	
1168	A1-1 WARM LOAD CENTER	23015	22.49	
1170	A1-2 WARM LOAD 1	23128	23.02	
1172	A1-2 WARM LOAD 2	23279	23.95	
1174	A1-2 WARM LOAD 3	23433	23.08	
1176	A1-2 WARM LOAD 4	23212	23.01	
1178	A1-2 WARM LOAD CENTER	23117	23.01	
1180	TEMP SENSOR REFERENCE VOLTAGE	25320		

DESCRIPTION

STATUS

STATUS

STATUS

SCANNER A1-1 POWER	ON		ON	
SCANNER A1-2 POWER	ON		ON	
PLL POWER	PLLO # 1	PLLO # 1	PLLO # 1	
ANTENNA IN WARM CAL POSITION MODE	NO	NO	NO	
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO	
ANTENNA IN NADIR POSITION MODE	NO	NO	NO	
ANTENNA IN FULL SCAN MODE	YES	YES	YES	
SURVIVAL HEATER POWER	OFF	OFF	OFF	
MODULE POWER	CONNECT	CONNECT	CONNECT	
COLD CAL POSITION MSB	ZERO	ZERO	ZERO	
COLD CAL POSITION LSB	ZERO	ZERO	ZERO	

ANALOG DATA

DESCRIPTION

VALUE

DEG C

VALUE

DEG C

A1-1 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0
A1-2 SCANNER MOTOR TEMPERATURE	215	18.0	214	18.0
A1-1 RF SHELF TEMPERATURE	217	19.4	215	19.4
A1-2 RF SHELF TEMPERATURE	213	22.1	217	22.1
A1-1 WARM LOAD TEMPERATURE	214	16.6	213	16.6
A1-2 WARM LOAD TEMPERATURE	214	18.0	214	18.0

DESCRIPTION

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	87	40.54	87	40.54
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	84	39.14	84	39.14
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	171	14.76	170	14.67
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	148	-15.15	147	-15.20
RECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	145	4.83	145	4.83
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76
PHASE LOCK LOOP (CHANNEL 9/14)	169	14.58	169	14.58
PHASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30
L.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 3)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78
PLLO # 2 LOCK DETECT	1	0.02	1	0.02
PLLO # 1 LOCK DETECT	220	4.40	220	4.40
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

AMSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 09:22:54 SCAN NUMBER 504
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

COMMANDS
[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL0 # 1 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]
POWER [4] ON
SELECT TOUCHSCREEN BUTTON 3 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

PRE - HIGH FREQ. 6.67Hz MLB
3.24.2.1.4.3

TDS 51

NO: 748613 OA: 0810 1ST CPT
PN: 1334 0-3-II SN: 109

(139)
T

TEST ENG: A 11/20/99

FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	111111111	572	SCENE DATA BP 17	CH 8
2	SYNC SEQUENCE	111111111	574		CH 9
3	SYNC SEQUENCE	111111111	576		CH 10
4	UNIT ID AND SERIAL NO	00100001	578		CH 11
5	DIGITAL B DATA BYTE 1	00000010	580		CH 12
6	DIGITAL B DATA BYTE 2	00000110	582		CH 13
7	DIGITAL B DATA BYTE 3	00000000	584		CH 14
8	DIGITAL B DATA BYTE 4	00000000	586		CH 15
10	REFLECTOR 1 POSITION	16225	588	REFLECTOR 1 POSITION 18	2596
12	REFLECTOR 2 POSITION	16223	590	REFLECTOR 2 POSITION 18	2417
14	REFL 1 POS 1	16224	592	REFL 1 POS 18	2601
16	REFL 2 POS 1	16174	594	REFL 2 POS 18	2419
18	SCENE DATA BP 1	16250	596	SCENE DATA BP 18	16162
20		17376	598		16249
22		16753	600		17383
24		16599	602		16772
26		16361	604		16622
28		16438	606		16371
30		15954	608		16446
32		17267	610		15956
34		17025	612		17272
36		19819	614		17023
38		17753	616		19801
40		14841	618		17767
42		16372	620		14853
44		174	622		2748
46		16375	624		2567
48		16177	626		2753
50		16245	628		2570
52		17373	630		16150
54		16607	632		16233
56		16355	634		17357
58		16442	636		16759
60		15954	638		16602
62		17264	640		16344
64		17027	642		16438
66		19818	644		15960
68		17765	646		17266
70		14841	648		17021
72		324	650		19804
74		142	652		17760
76		326	654		14842
78		148	656		2897
80		16150	658		2718
82		16235	660		2905
84		17364	662		2722
86		16761	664		16153
88			666		16236
90			668		17362
92			670		16759

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16606	672	CH 7	16602
96	CH 8	16339	674	CH 8	16346
98	CH 9	16441	676	CH 9	16440
100	CH 10	15960	678	CH 10	15953
102	CH 11	17264	680	CH 11	17265
104	CH 12	17029	682	CH 12	17027
106	CH 13	19827	684	CH 13	19810
108	CH 14	17741	686	CH 14	17765
110	CH 15	14846	688	CH 15	14842
112	REFLECTOR 1 POSITION 4	475	690	REFLECTOR 1 POSITION 21	3053
114	REFLECTOR 2 POSITION 4	295	692	REFLECTOR 2 POSITION 21	2868
116	REFL 1 POS 4 2ND LOOK	478	694	REFL 1 POS 21 2ND LOOK	3057
118	REFL 2 POS 4 2ND LOOK	299	696	REFL 2 POS 21 2ND LOOK	2874
120	SCENE DATA BP 4	16155	698	SCENE DATA BP 21	16151
122	CH 3	16236	700	CH 3	16235
124	CH 4	17359	702	CH 4	17362
126	CH 5	16772	704	CH 5	16755
128	CH 6	16612	706	CH 6	16602
130	CH 7	16351	708	CH 7	16347
132	CH 8	16442	710	CH 8	16437
134	CH 9	15965	712	CH 9	15952
136	CH 10	17276	714	CH 10	17261
138	CH 11	17035	716	CH 11	17022
140	CH 12	19817	718	CH 12	19807
142	CH 13	17745	720	CH 13	17756
144	CH 14	14847	722	CH 14	14842
146	CH 15	625	724	REFLECTOR 1 POSITION 22	3202
148	REFLECTOR 2 POSITION 5	444	726	REFLECTOR 2 POSITION 22	3023
150	REFL 1 POS 5 2ND LOOK	632	728	REFL 1 POS 22 2ND LOOK	3026
152	REFL 2 POS 5 2ND LOOK	448	730	REFL 2 POS 22 2ND LOOK	3027
154	SCENE DATA BP 5	16149	732	SCENE DATA BP 22	16153
156	CH 3	16237	734	CH 3	16236
158	CH 4	17360	736	CH 4	17358
160	CH 5	16770	738	CH 5	16757
162	CH 6	16616	740	CH 6	16603
164	CH 7	16352	742	CH 7	16346
166	CH 8	16445	744	CH 8	16436
168	CH 9	15972	746	CH 9	15958
170	CH 10	17263	748	CH 10	17266
172	CH 11	17031	750	CH 11	17029
174	CH 12	19813	752	CH 12	19816
176	CH 13	17769	754	CH 13	17755
178	CH 14	14847	756	CH 14	14843
180	CH 15	777	758	REFLECTOR 1 POSITION 23	3350
182	REFLECTOR 2 POSITION 6	596	760	REFLECTOR 2 POSITION 23	3172
184	REFL 1 POS 6 2ND LOOK	781	762	REFL 1 POS 23 2ND LOOK	3358
186	REFL 2 POS 6 2ND LOOK	598	764	REFL 2 POS 23 2ND LOOK	3177
188	SCENE DATA BP 6	16152	766	SCENE DATA BP 23	16153
190	CH 3	16233	768	CH 3	16234
192	CH 4	17354	770	CH 4	17358
	CH 5			CH 5	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16771	772	REFLECTOR 1 POSITION 24	16758
196	CH 7	16619	774	REFLECTOR 2 POSITION 24	16600
198	CH 8	16345	776	REFL 1 POS 24	16344
200	CH 9	16450	778	REFL 2 POS 24	16437
202	CH 10	15961	780	SCENE DATA BP 24	15957
204	CH 11	17275	782	CH 3	17263
206	CH 12	17024	784	CH 4	17016
208	CH 13	19826	786	CH 5	19810
210	CH 14	17759	788	CH 6	17753
212	CH 15	14854	790	CH 7	14842
214	REFLECTOR 1 POSITION 7	929	792	REFLECTOR 1 POSITION 24	3504
216	REFLECTOR 2 POSITION 7	747	794	REFLECTOR 2 POSITION 24	3325
218	REFL 1 POS 7	933	796	REFL 1 POS 24	3508
220	REFL 2 POS 7	748	798	REFL 2 POS 24	3330
222	SCENE DATA BP 7	16158	800	SCENE DATA BP 24	16146
224	CH 3	16235	802	CH 3	16234
226	CH 4	17360	804	CH 4	17364
228	CH 5	16754	806	CH 5	16758
230	CH 6	16603	808	CH 6	16602
232	CH 7	16344	810	CH 7	16341
234	CH 8	16437	812	CH 8	16437
236	CH 9	15953	814	CH 9	15958
238	CH 10	17262	816	CH 10	17268
240	CH 11	17027	818	CH 11	17027
242	CH 12	19822	820	CH 12	19820
244	CH 13	17743	822	CH 13	17762
246	CH 14	14844	824	CH 14	14844
248	CH 15	11078	826	CH 15	3654
250	REFLECTOR 1 POSITION 8	900	828	REFLECTOR 1 POSITION 25	3475
252	REFLECTOR 2 POSITION 8	1085	830	REFLECTOR 2 POSITION 25	3660
254	REFL 1 POS 8	902	832	REFL 1 POS 25	3481
256	REFL 2 POS 8	16139	834	REFL 2 POS 25	16139
258	SCENE DATA BP 8	16236	836	SCENE DATA BP 25	16235
260	CH 3	16757	838	CH 3	17361
262	CH 4	16603	840	CH 4	16756
264	CH 5	16346	842	CH 5	16603
266	CH 6	16440	844	CH 6	16345
268	CH 7	15956	846	CH 7	16438
270	CH 8	17259	848	CH 8	15953
272	CH 9	17035	850	CH 9	17264
274	CH 10	19821	852	CH 10	17024
276	CH 11	17761	854	CH 11	19829
278	CH 12	14845	856	CH 12	17757
280	CH 13	12333	858	CH 13	14841
282	CH 14	10511	860	CH 14	3804
284	CH 15	12336	862	CH 15	3627
286	REFLECTOR 1 POSITION 9	1236	864	REFLECTOR 1 POSITION 26	3813
288	REFLECTOR 2 POSITION 9	1054	866	REFLECTOR 2 POSITION 26	3632
290	REFL 1 POS 9	16148	868	REFL 1 POS 26	16164
292	REFL 2 POS 9	16239	870	REFL 2 POS 26	16238
294	SCENE DATA BP 9			SCENE DATA BP 26	
296	CH 3			CH 3	
298	CH 4			CH 4	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17371	872	CH 5	17362
296	CH 6	16756	874	CH 6	16756
298	CH 7	16604	876	CH 7	16604
300	CH 8	16347	878	CH 8	16347
302	CH 9	16439	880	CH 9	16438
304	CH 10	15959	882	CH 10	15961
306	CH 11	17261	884	CH 11	17264
308	CH 12	17031	886	CH 12	17027
310	CH 13	19813	888	CH 13	19816
312	CH 14	17770	890	CH 14	17776
314	CH 15	14843	892	CH 15	14842
316	REFLECTOR 1 POSITION 10	1384	894	REFLECTOR 1 POSITION 27	3969
318	REFLECTOR 2 POSITION 10	1205	896	REFLECTOR 2 POSITION 27	3782
320	REFL 1 POS 10	1388	898	REFL 1 POS 27	3971
322	REFL 2 POS 10	1205	900	REFL 2 POS 27	3785
324	SCENE DATA BP 10	16159	902	SCENE DATA BP 27	16139
326	CH 3	16236	904	CH 3	16242
328	CH 4	17363	906	CH 4	17370
330	CH 5	16755	908	CH 5	16753
332	CH 6	16605	910	CH 6	16600
334	CH 7	16347	912	CH 7	16347
336	CH 8	16435	914	CH 8	16435
338	CH 9	15960	916	CH 9	15950
340	CH 10	17265	918	CH 10	17263
342	CH 11	17029	920	CH 11	17034
344	CH 12	19829	922	CH 12	19819
346	CH 13	17781	924	CH 13	17754
348	CH 14	14842	926	CH 14	14843
350	CH 15	15355	928	CH 15	4110
352	REFLECTOR 1 POSITION 11	1356	930	REFLECTOR 1 POSITION 28	3936
354	REFLECTOR 2 POSITION 11	1356	932	REFLECTOR 2 POSITION 28	4114
356	REFL 1 POS 11	1356	934	REFL 1 POS 28	3935
358	REFL 2 POS 11	1356	936	REFL 2 POS 28	16132
360	SCENE DATA BP 11	16137	938	SCENE DATA BP 28	16241
362	CH 3	16234	940	CH 3	16241
364	CH 4	17368	942	CH 4	17363
366	CH 5	16756	944	CH 5	16754
368	CH 6	16599	946	CH 6	16599
370	CH 7	16346	948	CH 7	16347
372	CH 8	16438	950	CH 8	16433
374	CH 9	15958	952	CH 9	15956
376	CH 10	17263	954	CH 10	17261
378	CH 11	17025	956	CH 11	17029
380	CH 12	19816	958	CH 12	19821
382	CH 13	17748	960	CH 13	17763
384	CH 14	14843	962	CH 14	14842
386	CH 15	1686	964	CH 15	4258
388	REFLECTOR 1 POSITION 12	1506	966	REFLECTOR 1 POSITION 29	4085
390	REFLECTOR 2 POSITION 12	1691	968	REFLECTOR 2 POSITION 29	4269
392	REFL 1 POS 12	1509	970	REFL 1 POS 29	4088
	REFL 2 POS 12	16167		REFL 2 POS 29	16113
	SCENE DATA BP 12			SCENE DATA BP 29	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16237	972	REFLECTOR 1 POSITION 30	14843
396	CH 5	17360	974	REFLECTOR 2 POSITION 30	1839
398	CH 6	16757	976	REFLECTOR 1 POS 30	1657
400	CH 7	16604	978	REFLECTOR 2 POS 30	1843
402	CH 8	16346	980	REFLECTOR 1 POS 30	1660
404	CH 9	16443	982	REFLECTOR 2 POS 30	16142
406	CH 10	15958	984	REFLECTOR 1 POS 30	16244
408	CH 11	17268	986	REFLECTOR 2 POS 30	17372
410	CH 12	17031	988	REFLECTOR 1 POS 30	16621
412	CH 13	19826	990	REFLECTOR 2 POS 30	16361
414	CH 14	17767	992	REFLECTOR 1 POS 30	16452
416	CH 15	14843	994	REFLECTOR 2 POS 30	15956
418	REFLECTOR 1 POSITION 30	1839	996	REFLECTOR 1 POS 30	17283
420	REFLECTOR 2 POSITION 30	1657	998	REFLECTOR 2 POS 30	17048
422	REFLECTOR 1 POS 30	1843	1000	REFLECTOR 1 POS 30	19833
424	REFLECTOR 2 POS 30	1660	1002	REFLECTOR 2 POS 30	17749
426	REFLECTOR 1 POS 30	16142	1004	REFLECTOR 1 POS 30	14853
428	REFLECTOR 2 POS 30	16244	1006	REFLECTOR 2 POS 30	1989
430	REFLECTOR 1 POS 30	17372	1008	REFLECTOR 2 POS 30	1807
432	REFLECTOR 2 POS 30	16621	1010	REFLECTOR 1 POS 30	1995
434	REFLECTOR 1 POS 30	16361	1012	REFLECTOR 2 POS 30	1812
436	REFLECTOR 2 POS 30	16452	1014	REFLECTOR 1 POS 30	16139
438	REFLECTOR 1 POS 30	15956	1016	REFLECTOR 2 POS 30	16244
440	REFLECTOR 2 POS 30	17283	1018	REFLECTOR 1 POS 30	17377
442	REFLECTOR 1 POS 30	17048	1020	REFLECTOR 2 POS 30	16618
444	REFLECTOR 2 POS 30	19833	1022	REFLECTOR 1 POS 30	16344
446	REFLECTOR 1 POS 30	17749	1024	REFLECTOR 2 POS 30	16448
448	REFLECTOR 2 POS 30	14853	1026	REFLECTOR 1 POS 30	15980
450	REFLECTOR 1 POS 30	1989	1028	REFLECTOR 2 POS 30	17278
452	REFLECTOR 2 POS 30	1807	1030	REFLECTOR 1 POS 30	17037
454	REFLECTOR 1 POS 30	1995	1032	REFLECTOR 2 POS 30	19806
456	REFLECTOR 2 POS 30	1812	1034	REFLECTOR 1 POS 30	17767
458	REFLECTOR 1 POS 30	16139	1036	REFLECTOR 2 POS 30	14851
460	REFLECTOR 2 POS 30	16244	1038	REFLECTOR 1 POS 30	2143
462	REFLECTOR 1 POS 30	17377	1040	REFLECTOR 2 POS 30	1962
464	REFLECTOR 2 POS 30	16618	1042	REFLECTOR 1 POS 30	2147
466	REFLECTOR 1 POS 30	16344	1044	REFLECTOR 2 POS 30	1964
468	REFLECTOR 2 POS 30	16448	1046	REFLECTOR 1 POS 30	
470	REFLECTOR 1 POS 30	15980	1048	REFLECTOR 2 POS 30	
472	REFLECTOR 2 POS 30	17278	1050	REFLECTOR 1 POS 30	
474	REFLECTOR 1 POS 30	17037	1052	REFLECTOR 2 POS 30	
476	REFLECTOR 2 POS 30	19806	1054	REFLECTOR 1 POS 30	
478	REFLECTOR 1 POS 30	17767	1056	REFLECTOR 2 POS 30	
480	REFLECTOR 2 POS 30	14851	1058	REFLECTOR 1 POS 30	
482	REFLECTOR 1 POS 30	2143	1060	REFLECTOR 2 POS 30	
484	REFLECTOR 2 POS 30	1962	1062	REFLECTOR 1 POS 30	
486	REFLECTOR 1 POS 30	2147	1064	REFLECTOR 2 POS 30	
488	REFLECTOR 2 POS 30	1964	1066	REFLECTOR 1 POS 30	
490	REFLECTOR 1 POS 30		1068	REFLECTOR 2 POS 30	
492	REFLECTOR 2 POS 30		1070	REFLECTOR 1 POS 30	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	16165	1072	CH	16601
496		16251	1074	CH	16359
498		17372	1076	CH	16438
500		16771	1078	CH	15956
502		16628	1080	CH	17262
504		16353	1082	CH	17029
506		16455	1084	CH	17797
508		15961	1086	CH	17779
510		17279	1088	CH	14841
512		17034	1182	REFLECTOR 1 WARM CAL POS	10416
514		19833	1184	REFLECTOR 2 WARM CAL POS	10233
516		17791	1186	REFL 1 WARM CAL 2ND LOOK	10416
518		14853	1188	REFL 2 WARM CAL 2ND LOOK	10233
520	REFLECTOR 1 POSITION 16	22933	1190	WARM CAL DATA 1	16148
522	REFLECTOR 2 POSITION 16	2113	1192		16229
524	REFL 1 POS 16	2298	1194		17355
526	REFL 2 POS 16	2114	1196		16746
528	SCENE DATA BP 16	16203	1198		16592
530		16264	1200		16340
532		17382	1202		16426
534		16771	1204		15946
536		16617	1206		17254
538		16365	1208		17027
540		16450	1210		19803
542		15961	1212		17761
544		17283	1214		14836
546		17036	1216		16142
548		19828	1218		16229
550		17776	1220		17353
552		14848	1222		16745
554	REFLECTOR 1 POSITION 17	2445	1224		16593
556	REFLECTOR 2 POSITION 17	2262	1226		16338
558	REFL 1 POS 17	2449	1228		16428
560	REFL 2 POS 17	2265	1230		15946
562	SCENE DATA BP 17	16150	1232		17258
564		16245	1234		17018
566		17379	1236		19804
568		16771	1238		17747
570		16616	1240		14838

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
1090	SCAN MOTOR A1-1	17597	22.81	1
1092	SCAN MOTOR A1-2	18410	23.17	7
1094	FEEDHORN A1-1	18829	24.58	8
1096	FEEDHORN A1-2	19500	25.89	9
1098	RF MUX A1-1	20059	26.48	10
1100	RF MUX A1-2	20818	27.94	11
1102	LOCAL OSCILLATOR CHANNEL 3	21815	29.78	12
1104	LOCAL OSCILLATOR CHANNEL 4	21809	29.46	13
1106	LOCAL OSCILLATOR CHANNEL 5	21489	29.36	14
1108	LOCAL OSCILLATOR CHANNEL 6	19934	26.60	15
1110	LOCAL OSCILLATOR CHANNEL 7	20488	27.44	16
1112	LOCAL OSCILLATOR CHANNEL 8	20907	29.15	17
1114	LOCAL OSCILLATOR CHANNEL 15	21543	28.90	18
1116	PLL LO #2 CHANNELS 9 THROUGH 14	19872	26.16	19
1118	PLL LO #1 CHANNELS 9 THROUGH 14	22538	31.27	20
1120	SPARE (NOT USED)	32767	51.27	21
1122	MIXER/IF AMPLIFIER CHANNEL 3	21489	28.34	22
1124	MIXER/IF AMPLIFIER CHANNEL 4	21494	28.55	23
1126	MIXER/IF AMPLIFIER CHANNEL 5	21157	28.29	24
1128	MIXER/IF AMPLIFIER CHANNEL 6	20251	26.92	25
1130	MIXER/IF AMPLIFIER CHANNEL 7	20304	27.52	26
1132	MIXER/IF AMPLIFIER CHANNEL 8	21308	28.38	27
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20230	26.35	28
1136	MIXER/IF AMPLIFIER CHANNEL 15	21020	28.39	29
1138	IF AMPLIFIER CHANNEL 11 THRU 14	20993	28.48	30
1140	IF AMPLIFIER CHANNEL 9	21013	28.49	31
1142	IF AMPLIFIER CHANNEL 10	21175	26.52	32
1144	IF AMPLIFIER CHANNEL 11	19986	29.61	33
1146	DC/DC CONVERTER	21670	26.54	34
1148	IF AMPLIFIER CHANNEL 13	20008	26.84	35
1150	IF AMPLIFIER CHANNEL 14	20116	26.45	36
1152	IF AMPLIFIER CHANNEL 12	19979	27.45	37
1154	RF SHELF A1-1	20667	27.93	38
1156	RF SHELF A1-2	18938	24.84	39
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	23125	22.60	40
1160	A1-1 WARM LOAD 1	22879	22.54	41
1162	A1-1 WARM LOAD 2	23106	22.61	42
1164	A1-1 WARM LOAD 3	23047	22.57	43
1166	A1-1 WARM LOAD 4	23128	22.71	44
1168	A1-1 WARM LOAD CENTER	23330	23.41	45
1170	A1-2 WARM LOAD 1	23485	23.35	46
1172	A1-2 WARM LOAD 2	23643	23.47	47
1174	A1-2 WARM LOAD 3	23419	23.47	48
1176	A1-2 WARM LOAD 4	23316	23.40	49
1178	A1-2 WARM LOAD CENTER	25322		50
1180	TEMP SENSOR REFERENCE VOLTAGE			

DESCRIPTION

STATUS

STATUS

STATUS

SCANNER A1-1 POWER	ON		ON
SCANNER A1-2 POWER	ON		ON
PLL POWER	PLLO # 1	PLLO # 1	PLLO # 1
ANTENNA IN WARM CAL POSITION MODE	NO	NO	NO
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO
ANTENNA IN NADIR POSITION MODE	NO	NO	NO
ANTENNA IN FULL SCAN MODE	YES	YES	YES
SURVIVAL HEATER POWER	OFF	OFF	OFF
MODULE POWER	CONNECT	CONNECT	CONNECT
COLD CAL POSITION MSB	ZERO	ZERO	ZERO
COLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA

DESCRIPTION

VALUE

DEG C

VALUE

DEG C

VALUE

DEG C

A1-1 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0	214	18.0
A1-2 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0	214	18.0
A1-1 RF SHELF TEMPERATURE	215	19.4	215	19.4	215	19.4
A1-2 RF SHELF TEMPERATURE	217	22.1	217	22.1	217	22.1
A1-1 WARM LOAD TEMPERATURE	213	16.6	214	18.0	213	16.6
A1-2 WARM LOAD TEMPERATURE	214	18.0	214	18.0	214	18.0

DESCRIPTION

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	88	41.01	87	40.54	87	40.54
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	84	39.14	84	39.14	84	39.14
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	148	-15.15	148	-15.15	148	-15.15
SIGNAL PROCESSING -15 VDC	147	-15.20	147	-15.20	147	-15.20
ANTENNA DRIVE -15 VDC	157	7.85	157	7.85	157	7.85
RECEIVER AMPLIFIER +8 VDC	145	4.83	145	4.83	145	4.83
SIGNAL PROCESSOR +5 VDC	145	4.83	144	4.80	144	4.80
ANTENNA DRIVE +5 VDC	169	9.76	169	9.76	169	9.76
RECEIVER MIXER/IF +10 VDC	169	14.58	169	14.58	169	14.58
PHASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30	145	-15.30
PHASE LOCK LOOP (CHANNEL 9/14)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 7)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 6)	171	9.78	172	9.84	171	9.78
L.O. VOLTAGE (CHANNEL 3)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78	171	9.78
PLLO # 2 LOCK DETECT	1	0.02	1	0.02	1	0.02
PLLO # 1 LOCK DETECT	220	4.40	220	4.40	220	4.40
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

MSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 09:26:48 SCAN NUMBER 533
5] DIGITAL A DATA ELEMENT 0000
6] DIGITAL B DATA ELEMENT 00
7] ANALOG DATA ELEMENT 00

COMMANDS
9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL0 # 1 [18]
13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]
POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 3

POST - HIGH FREQ 6.67 Hz MLB

3.2.4.2.1.4.3

TDs 51

NO: 748613 OP: 0810 1ST CPT
SN: 1331720-3-II SN: 109

(139)
T

TEST ENG: (102) DATE: 11/20/99

FULL SCAN MODE

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE BYTE 1	11111111	572	SCENE DATA BP 17	CH 8
2	SYNC SEQUENCE BYTE 2	11111111	574		CH 9
3	SYNC SEQUENCE BYTE 3	11111111	576		CH 10
4	UNIT ID AND SERIAL NO	00100001	578		CH 11
5	DIGITAL B DATA BYTE 1	00000010	580		CH 12
6	DIGITAL B DATA BYTE 2	00001110	582		CH 13
7	DIGITAL B DATA BYTE 3	00000000	584		CH 14
8	DIGITAL B DATA BYTE 4	00000000	586		CH 15
10	REFLECTOR 1 POSITION	24	588	REFLECTOR 1 POSITION 18	2597
12	REFLECTOR 2 POSITION	1	590	REFLECTOR 2 POSITION 18	2414
14	REFL 1 POS 1	16225	592	REFL 1 POS 18 2ND LOOK	2601
16	REFL 2 POS 1	223	594	REFL 2 POS 18 2ND LOOK	2419
18	SCENE DATA BP 1	16224	596	SCENE DATA BP 18	16153
20		16160	598		1162229
22		16230	600		1173762
24		17358	602		1166122
26		16742	604		1163582
28		16594	606		1164332
30		16353	608		1159502
32		16425	610		1172602
34		15941	612		1170142
36		17246	614		1197921
38		17009	616		1177311
40		19778	618		1148388
42		17726	620		22749
44		14827	622	REFLECTOR 1 POSITION 19	2567
46	REFLECTOR 1 POSITION	167	624	REFLECTOR 2 POSITION 19	2753
48	REFLECTOR 2 POSITION	16371	626	REFL 1 POS 19 2ND LOOK	2570
50	REFL 1 POS 2	175	628	REFL 2 POS 19 2ND LOOK	16138
52	REFL 2 POS 2	16375	630	SCENE DATA BP 19	162133
54	SCENE DATA BP 2	16171	632		1173522
56		16225	634		1167437
58		17356	636		1165977
60		16745	638		1163300
62		16592	640		1164199
64		16339	642		1159444
66		16424	644		1172338
68		15942	646		1170122
70		17246	648		1197799
72		17010	650		1177127
74		19803	652		1148277
76		17747	654	REFLECTOR 1 POSITION 20	2898
78	REFLECTOR 1 POSITION	14825	656	REFLECTOR 2 POSITION 20	2718
80	REFLECTOR 2 POSITION	323	658	REFL 1 POS 20 2ND LOOK	2904
82	REFL 1 POS 3	142	660	REFL 2 POS 20 2ND LOOK	2722
84	REFL 2 POS 3	327	662	SCENE DATA BP 20	16144
86	SCENE DATA BP 3	147	664		16217
88		16140	666		117348
90		16218	668		116742
92		17348	670		
		16749			

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16598	672	CH 7	16596
96	CH 8	16331	674	CH 8	16329
98	CH 9	16429	676	CH 9	16424
100	CH 10	15947	678	CH 10	15935
102	CH 11	17249	680	CH 11	17248
104	CH 12	17006	682	CH 12	17008
106	CH 13	19783	684	CH 13	19772
108	CH 14	17743	686	CH 14	17771
110	CH 15	14831	688	CH 15	14827
112	REFLECTOR 1 POSITION	475	690	REFLECTOR 1 POSITION	3051
114	REFLECTOR 2 POSITION	297	692	REFLECTOR 2 POSITION	2868
116	REFL 1 POS	478	694	REFL 1 POS	3056
118	REFL 2 POS	299	696	REFL 2 POS	2874
120	SCENE DATA	16141	698	SCENE DATA	16153
122	CH 3	16215	700	CH 3	16215
124	CH 4	17346	702	CH 4	17346
126	CH 5	16758	704	CH 5	16742
128	CH 6	16598	706	CH 6	16589
130	CH 7	16333	708	CH 7	16331
132	CH 8	16430	710	CH 8	16422
134	CH 9	15955	712	CH 9	15940
136	CH 10	17253	714	CH 10	17249
138	CH 11	17014	716	CH 11	17011
140	CH 12	19795	718	CH 12	19775
142	CH 13	17736	720	CH 13	17710
144	CH 14	14832	722	CH 14	14824
146	CH 15	624	724	CH 15	3201
148	REFLECTOR 1 POSITION	445	726	REFLECTOR 1 POSITION	3022
150	REFLECTOR 2 POSITION	632	728	REFLECTOR 2 POSITION	3206
152	REFL 1 POS	448	730	REFL 1 POS	3027
154	REFL 2 POS	16131	732	REFL 2 POS	16145
156	SCENE DATA	16214	734	SCENE DATA	16212
158	CH 3	17349	736	CH 3	17348
160	CH 4	16755	738	CH 4	16740
162	CH 5	16603	740	CH 5	16593
164	CH 6	16333	742	CH 6	16333
166	CH 7	16432	744	CH 7	16420
168	CH 8	15956	746	CH 8	15941
170	CH 9	17246	748	CH 9	17240
172	CH 10	17018	750	CH 10	17009
174	CH 11	19792	752	CH 11	19778
176	CH 12	17741	754	CH 12	17705
178	CH 13	14831	756	CH 13	14825
180	CH 14	778	758	CH 14	3350
182	REFLECTOR 1 POSITION	594	760	REFLECTOR 1 POSITION	3172
184	REFLECTOR 2 POSITION	782	762	REFLECTOR 2 POSITION	3358
186	REFL 1 POS	598	764	REFL 1 POS	3177
188	REFL 2 POS	16134	766	REFL 2 POS	16138
190	SCENE DATA	16213	768	SCENE DATA	16219
192	CH 3	17345	770	CH 3	17346

FULL SCAN MODE

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH	16760	772	REFLECTOR 1 POSITION	16742
196	CH	16610	774	REFLECTOR 2 POSITION	16592
198	CH	16333	776	REFL 1 POS	16332
200	CH	16438	778	REFL 2 POS	16424
202	CH	15948	780	SCENE DATA	15939
204	CH	17253	782	BP	17241
206	CH	17012	784		17005
208	CH	19801	786		19790
210	CH	17747	788		17732
212	CH	14837	790		14826
214	CH	928	792		3505
216	CH	749	794		3325
218	CH	933	796		3508
220	CH	748	798		3330
222	CH	16142	800		16136
224	CH	16216	802		16213
226	CH	17348	804		17347
228	CH	16744	806		16742
230	CH	16596	808		16591
232	CH	16333	810		16329
234	CH	16428	812		16420
236	CH	15937	814		15947
238	CH	17250	816		17244
240	CH	17012	818		17010
242	CH	19783	820		19781
244	CH	17727	822		17745
246	CH	14828	824		14825
248	CH	1079	826		3654
250	CH	899	828		3475
252	CH	1084	830		3659
254	CH	902	832		3480
256	CH	16135	834		16136
258	CH	16214	836		16216
260	CH	17347	838		17349
262	CH	16744	840		16739
264	CH	16592	842		16591
266	CH	16331	844		16336
268	CH	16427	846		16419
270	CH	15948	848		15940
272	CH	17240	850		17245
274	CH	17016	852		17004
276	CH	19792	854		19790
278	CH	17733	856		17733
280	CH	14827	858		14825
282	CH	1233	860		3805
284	CH	1051	862		3626
286	CH	1236	864		3812
288	CH	1054	866		3632
290	CH	16138	868		16153
292	CH	16220	870		16219

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17352	872	REFLECTOR 1 POSITION 27	3971
296	CH 6	16743	874	REFLECTOR 2 POSITION 27	3779
298	CH 7	16594	876	REFL 1 POS 27 2ND LOOK	3971
300	CH 8	16336	878	REFL 2 POS 27 2ND LOOK	3785
302	CH 9	16423	880	SCENE DATA BP 27	16139
304	CH 10	15940	882	CH 3	16222
306	CH 11	17246	884	CH 4	17357
308	CH 12	17010	886	CH 5	16589
310	CH 13	19802	888	CH 6	16333
312	CH 14	17737	890	CH 7	16425
314	CH 15	14828	892	CH 8	15940
316	REFLECTOR 1 POSITION 10	1384	894	CH 9	17246
318	REFLECTOR 2 POSITION 10	1202	896	CH 10	17017
320	REFL 1 POS 10 2ND LOOK	1389	898	CH 11	19797
322	REFL 2 POS 10 2ND LOOK	1205	900	CH 12	17718
324	SCENE DATA BP 10	16144	902	CH 13	14826
326	CH 3	16217	904	CH 14	4110
328	CH 4	17349	906	CH 15	3935
330	CH 5	16745	908	REFLECTOR 1 POSITION 28	3935
332	CH 6	16591	910	REFLECTOR 2 POSITION 28	4115
334	CH 7	16337	912	REFL 1 POS 28 2ND LOOK	3936
336	CH 8	16422	914	REFL 2 POS 28 2ND LOOK	16127
338	CH 9	15944	916	SCENE DATA BP 28	16224
340	CH 10	17244	918	CH 3	17352
342	CH 11	17010	920	CH 4	16741
344	CH 12	19798	922	CH 5	16592
346	CH 13	17722	924	CH 6	16332
348	CH 14	14826	926	CH 7	16419
350	CH 15	15334	928	CH 8	15942
352	REFLECTOR 1 POSITION 11	1355	930	CH 9	17239
354	REFLECTOR 2 POSITION 11	1540	932	CH 10	17005
356	REFL 1 POS 11 2ND LOOK	1356	934	CH 11	19763
358	REFL 2 POS 11 2ND LOOK	16124	936	CH 12	17717
360	SCENE DATA BP 11	16216	938	CH 13	14825
362	CH 3	17351	940	CH 14	4260
364	CH 4	16744	942	CH 15	4083
366	CH 5	16588	944	REFLECTOR 1 POSITION 29	4267
368	CH 6	16333	946	REFLECTOR 2 POSITION 29	4087
370	CH 7	16421	948	REFL 1 POS 29 2ND LOOK	16099
372	CH 8	15948	950	REFL 2 POS 29 2ND LOOK	
374	CH 9	17242	952	SCENE DATA BP 29	
376	CH 10	17012	954	CH 3	
378	CH 11	19773	956	CH 4	
380	CH 12	17725	958	CH 5	
382	CH 13	14828	960	CH 6	
384	CH 14	1686	962	CH 7	
386	CH 15	1507	964	CH 8	
388	REFLECTOR 1 POSITION 12	1591	966	CH 9	
390	REFL 1 POS 12 2ND LOOK	1691	968	CH 10	
392	REFL 2 POS 12 2ND LOOK	1509	970	CH 11	
	SCENE DATA BP 12	16157		CH 12	
	CH 1			CH 13	
	CH 2			CH 14	
	CH 3			CH 15	
	REFLECTOR 1 POSITION 1			REFLECTOR 2 POSITION 1	
	REFLECTOR 2 POSITION 1			REFL 1 POS 1 2ND LOOK	
	REFL 2 POS 1 2ND LOOK			SCENE DATA BP 1	
	CH 4			CH 5	
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	CH 13			CH 14	
	CH 14			CH 15	
	REFLECTOR 1 POSITION 2			REFLECTOR 2 POSITION 2	
	REFLECTOR 2 POSITION 2			REFL 1 POS 2 2ND LOOK	
	REFL 2 POS 2 2ND LOOK			SCENE DATA BP 2	
	CH 16			CH 17	
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LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH	16219	972	CH	16247
396	CH	17350	974	CH	17388
398	CH	16743	976	CH	16744
400	CH	16593	978	CH	16594
402	CH	16333	980	CH	16375
404	CH	16427	982	CH	16422
406	CH	15942	984	CH	15936
408	CH	17246	986	CH	17242
410	CH	17003	988	CH	17000
412	CH	19781	990	CH	19774
414	CH	17726	992	CH	17737
416	CH	14826	994	CH	14825
418	REFLECTOR 1 POSITION 13	18329	996	REFLECTOR 1 POSITION 30	4419
420	REFLECTOR 2 POSITION 13	1658	998	REFLECTOR 2 POSITION 30	4235
422	REFL 1 POS 13 2ND LOOK	1843	1000	REFL 1 POS 30 2ND LOOK	4423
424	REFL 2 POS 13 2ND LOOK	1660	1002	REFL 2 POS 30 2ND LOOK	4239
426	SCENE DATA BP 13	16131	1004	SCENE DATA BP 30	16170
428	CH	16224	1006	CH	16227
430	CH	17359	1008	CH	17359
432	CH	16761	1010	CH	16741
434	CH	16610	1012	CH	16587
436	CH	16351	1014	CH	16338
438	CH	16441	1016	CH	16425
440	CH	15946	1018	CH	15942
442	CH	17263	1020	CH	17248
444	CH	17028	1022	CH	16994
446	CH	19800	1024	CH	19786
448	CH	17752	1026	CH	17748
450	CH	14837	1028	CH	14826
452	REFLECTOR 1 POSITION 14	1989	1030	REFLECTOR 1 COLD CAL POS	6017
454	REFLECTOR 2 POSITION 14	1809	1032	REFLECTOR 2 COLD CAL POS	5833
456	REFL 1 POS 14 2ND LOOK	1994	1034	REFL 1 COLD CAL 2ND LOOK	6017
458	REFL 2 POS 14 2ND LOOK	1812	1036	REFL 2 COLD CAL 2ND LOOK	5833
460	SCENE DATA BP 14	16131	1038	COLD CAL DATA 1	16183
462	CH	16222	1040	CH	16226
464	CH	17363	1042	CH	17353
466	CH	16756	1044	CH	16744
468	CH	16606	1046	CH	16589
470	CH	16327	1048	CH	16347
472	CH	16436	1050	CH	16418
474	CH	15968	1052	CH	15937
476	CH	17254	1054	CH	17246
478	CH	17009	1056	CH	17008
480	CH	19790	1058	CH	19796
482	CH	17737	1060	CH	17728
484	CH	14836	1062	CH	14824
486	REFLECTOR 1 POSITION 15	2142	1064	COLD CAL DATA 2	16183
488	REFLECTOR 2 POSITION 15	1963	1066	CH	16226
490	REFL 1 POS 15 2ND LOOK	2147	1068	CH	17357
492	REFL 2 POS 15 2ND LOOK	1964	1070	CH	16740

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	16155	1072		16589
496	CH 3	16233	1074	CH 7	16352
498	CH 4	17362	1076	CH 8	16419
500	CH 5	16763	1078	CH 9	15947
502	CH 6	16620	1080	CH 10	17245
504	CH 7	16343	1082	CH 11	17000
506	CH 8	16446	1084	CH 12	19779
508	CH 9	15956	1086	CH 13	17726
510	CH 10	17263	1088	CH 14	14826
512	CH 11	17013	1182	CH 15	10416
514	CH 12	19796	1184	REFLECTOR 1 WARM CAL POS	10232
516	CH 13	17718	1186	REFLECTOR 2 WARM CAL POS	10416
518	CH 14	14837	1188	REFL 1 WARM CAL 2ND LOOK	10232
520	CH 15	2294	1190	REFL 2 WARM CAL 2ND LOOK	16133
522	REFLECTOR 1 POSITION 16	2114	1192	WARM CAL DATA 1	16210
524	REFLECTOR 2 POSITION 16	2299	1194		17339
526	REFL 1 POS 16 2ND LOOK	2115	1196		16728
528	REFL 2 POS 16 2ND LOOK	16192	1198		16582
530	SCENE DATA BP 16	16249	1200		16323
532	CH 3	17369	1202		16412
534	CH 4	16758	1204		15934
536	CH 5	16608	1206		17236
538	CH 6	16350	1208		16998
540	CH 7	16440	1210		19752
542	CH 8	15944	1212		17743
544	CH 9	17263	1214		14821
546	CH 10	17015	1216		16130
548	CH 11	19795	1218		16210
550	CH 12	17721	1220		17341
552	CH 13	14831	1222		16733
554	CH 14	2444	1224		16582
556	CH 15	2261	1226		16328
558	REFLECTOR 1 POSITION 17	2450	1228		16414
560	REFLECTOR 2 POSITION 17	2265	1230		15932
562	REFL 1 POS 17 2ND LOOK	16140	1232		17231
564	REFL 2 POS 17 2ND LOOK	16228	1234		17002
566	SCENE DATA BP 17	16761	1236		19772
568	CH 3	16606	1238		17726
570	CH 4		1240		14822
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	CH 7				
	CH 8				
	CH 9				
	CH 10				
	CH 11				
	CH 12				
	CH 13				
	CH 14				
	CH 15				
	REFLECTOR 1 POSITION 17				
	REFLECTOR 2 POSITION 17				
	REFL 1 POS 17 2ND LOOK				
	REFL 2 POS 17 2ND LOOK				
	SCENE DATA BP 17				
	CH 3				
	CH 4				
	CH 5				
	CH 6				
	CH 7				
	CH 8				
	CH 9				
	CH 10				
	CH 11				
	CH 12				
	CH 13				
	CH 14				
	CH 15				
	REFLECTOR 1 POSITION 17				
	REFLECTOR 2 POSITION 17				
	REFL 1 POS 17 2ND LOOK				
	REFL 2 POS 17 2ND LOOK				
	SCENE DATA BP 17				
	CH 3				
	CH 4				
	CH 5				
	CH 6				
	CH 7				
	CH 8				

FULL SCAN MODE

TEMPERATURE DEG C

VALUE

LEMENT DESCRIPTION

090	SCAN MOTOR A1-1	17627	22.87
092	SCAN MOTOR A1-2	18447	23.24
094	FEEDHORN A1-1	18892	24.70
096	FEEDHORN A1-2	19588	26.06
098	RF MUX A1-1	20180	26.71
100	RF MUX A1-2	20959	28.21
102	LOCAL OSCILLATOR CHANNEL 3	22009	30.15
104	LOCAL OSCILLATOR CHANNEL 4	22010	29.84
106	LOCAL OSCILLATOR CHANNEL 5	21656	29.68
108	LOCAL OSCILLATOR CHANNEL 6	20052	26.82
110	LOCAL OSCILLATOR CHANNEL 7	20618	27.69
112	LOCAL OSCILLATOR CHANNEL 8	21089	29.50
114	LOCAL OSCILLATOR CHANNEL 15	21734	29.27
116	PLL LO #2 CHANNELS 9 THROUGH 14	19946	26.30
118	PLL LO #1 CHANNELS 9 THROUGH 14	22841	31.82
120	SPARE (NOT USED)	32767	51.27
122	MIXER/IF AMPLIFIER CHANNEL 3	21629	28.61
124	MIXER/IF AMPLIFIER CHANNEL 4	21644	28.84
126	MIXER/IF AMPLIFIER CHANNEL 5	21304	28.57
128	MIXER/IF AMPLIFIER CHANNEL 6	20374	27.16
130	MIXER/IF AMPLIFIER CHANNEL 7	20435	27.51
132	MIXER/IF AMPLIFIER CHANNEL 8	21466	28.83
134	MIXER/IF AMPLIFIER CH 9 THRU 14	20333	26.58
136	MIXER/IF AMPLIFIER CHANNEL 15	21186	29.16
138	IF AMPLIFIER CHANNEL 11 THRU 14	21179	28.74
140	IF AMPLIFIER CHANNEL 9	21202	28.84
142	IF AMPLIFIER CHANNEL 10	21364	28.85
144	IF AMPLIFIER CHANNEL 11	20095	26.73
146	DC/DC CONVERTER	21935	30.12
148	IF AMPLIFIER CHANNEL 13	20117	26.75
150	IF AMPLIFIER CHANNEL 14	20224	27.05
152	IF AMPLIFIER CHANNEL 12	20013	26.66
154	RF SHELF A1-1	20140	27.76
156	RF SHELF A1-2	20818	27.22
158	DETECTOR/PREAMPLIFIER ASSEMBLY	19017	24.99
160	A1-1 WARM LOAD 1	23149	22.55
162	A1-1 WARM LOAD 2	22903	22.66
164	A1-1 WARM LOAD 3	23131	22.59
166	A1-1 WARM LOAD 4	23069	22.62
168	A1-1 WARM LOAD CENTER	23153	22.76
170	A1-2 WARM LOAD 1	23368	23.49
172	A1-2 WARM LOAD 2	23523	23.42
174	A1-2 WARM LOAD 3	23681	23.54
176	A1-2 WARM LOAD 4	23457	23.56
178	A1-2 WARM LOAD CENTER	23354	23.47
180	TEMP SENSOR REFERENCE VOLTAGE	25322	23.47

DESCRIPTION

STATUS

STATUS

STATUS

CANNER A1-1 POWER
 CANNER A1-2 POWER
 LL POWER
 NTENNA IN WARM CAL POSITION MODE
 NTENNA IN COLD CAL POSITION MODE
 NTENNA IN NADIR POSITION MODE
 NTENNA IN FULL SCAN MODE
 URVIVAL HEATER POWER
 ODULE POWER
 OLD CAL POSITION MSB
 OLD CAL POSITION LSB

ON
 ON
 PLLO # 1
 NO
 NO
 NO
 YES
 OFF
 CONNECT
 ZERO
 ZERO

ON
 ON
 PLLO # 1
 NO
 NO
 NO
 YES
 OFF
 CONNECT
 ZERO
 ZERO

ON
 ON
 PLLO # 1
 NO
 NO
 NO
 YES
 OFF
 CONNECT
 ZERO
 ZERO

ANALOG DATA
DESCRIPTION

VALUE

DEG C

VALUE

DEG C

VALUE

DEG C

VALUE

DEG C

1-1 SCANNER MOTOR TEMPERATURE
 1-2 SCANNER MOTOR TEMPERATURE
 1-1 RF SHELF TEMPERATURE
 1-2 RF SHELF TEMPERATURE
 1-1 WARM LOAD TEMPERATURE
 1-2 WARM LOAD TEMPERATURE

214 18.0
 214 18.0
 215 19.4
 218 23.4
 213 16.6
 214 18.0

214 18.0
 214 18.0
 215 19.4
 218 23.4
 213 16.6
 215 19.4

214 18.0
 214 18.0
 215 19.4
 218 23.4
 213 16.6
 215 19.4

DESCRIPTION

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)
 1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)
 IGNAL PROCESSING +15 VDC
 NTENNA DRIVE +15 VDC
 IGNAL PROCESSING -15 VDC
 NTENNA DRIVE -15 VDC
 ECEIVER AMPLIFIER +8 VDC
 IGNAL PROCESSOR +5 VDC
 NTENNA DRIVE +5 VDC
 ECEIVER MIXER/IF +10 VDC
 HASE LOCK LOOP (CHANNEL 9/14) +15 VDC
 HASE LOCK LOOP (CHANNEL 9/14) -15 VDC
 .O. VOLTAGE (CHANNEL 8)
 .O. VOLTAGE (CHANNEL 7)
 .O. VOLTAGE (CHANNEL 6)
 .O. VOLTAGE (CHANNEL 3)
 .O. VOLTAGE (CHANNEL 4)
 .O. VOLTAGE (CHANNEL 5)
 LLO # 2 LOCK DETECT
 LLO # 1 LOCK DETECT
 .O. VOLTAGE (CHANNEL 15)

87 40.54
 84 39.14
 170 14.67
 148 14.67
 147 -15.15
 157 -15.20
 146 7.85
 145 4.87
 169 4.83
 170 9.76
 145 14.67
 171 -15.30
 171 9.78
 171 9.78
 172 9.84
 171 9.84
 172 9.84
 171 9.78
 1 0.02
 220 4.40
 170 14.67

88 41.01
 85 39.61
 170 14.67
 148 14.67
 147 -15.15
 157 -15.20
 146 7.85
 145 4.87
 169 4.83
 170 9.76
 145 14.67
 171 -15.30
 171 9.78
 171 9.78
 172 9.84
 171 9.84
 172 9.84
 171 9.78
 1 0.02
 220 4.40
 170 14.67

87 40.54
 84 39.14
 170 14.67
 148 14.67
 147 -15.15
 157 -15.20
 146 7.85
 145 4.87
 169 4.83
 170 9.76
 145 14.67
 171 -15.30
 171 9.78
 171 9.78
 172 9.84
 171 9.84
 172 9.84
 171 9.78
 1 0.02
 220 4.40
 170 14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

ASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

ASEPLATE HEATER N2

ASEPLATE N2

ASEPLATE FLOW METER

DJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

5] DIGITAL A DATA ELEMENT 0000
6] DIGITAL B DATA ELEMENT 00
7] ANALOG DATA ELEMENT 00

COMMANDS
9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
12] SCANNER A1 - 1 POWER = ON PLL POWER = PLLO # 1 [18]
13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 3

PLB PRE-LOW FREQ TRANSIENT
3.2.4.2.2.9

TDS 51

1ST CPT

NO: 748613 OP: 0810
YN: 1331720-3-II SN: 109

139
T

TEST ENG: (24)
DATE: 11/20/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE BYTE 1	11111111	572	SCENE DATA BP 17	16398
2	SYNC SEQUENCE BYTE 2	11111111	574		16463
3	SYNC SEQUENCE BYTE 3	11111111	576		15991
4	UNIT ID AND SERIAL NO	00100001	578		17288
5	DIGITAL B DATA BYTE 1	00000010	580		17051
6	DIGITAL B DATA BYTE 2	00001110	582		19851
7	DIGITAL B DATA BYTE 3	00000000	584		17785
8	DIGITAL B DATA BYTE 4	00000000	586		14875
10	REFLECTOR 1 POSITION	16225	588	REFLECTOR 1 POSITION 18	2597
12	REFLECTOR 2 POSITION	16225	590	REFLECTOR 2 POSITION 18	2417
14	REFL 1 POS 1	16225	592	REFL 1 POS 18 2ND LOOK	2601
16	REFL 2 POS 1	16225	594	REFL 2 POS 18 2ND LOOK	2419
18	SCENE DATA BP 1	16201	596	SCENE DATA BP 18	16195
20		16299	598		16296
22		17416	600		17426
24		16782	602		16796
26		16618	604		16639
28		16398	606		16400
30		16447	608		16450
32		15965	610		15969
34		17274	612		17288
36		17036	614		17044
38		19834	616		19837
40		17762	618		17749
42		14865	620		14875
44	REFLECTOR 1 POSITION	166	622	REFLECTOR 1 POSITION 19	2748
46	REFLECTOR 2 POSITION	16371	624	REFLECTOR 2 POSITION 19	2568
48	REFL 1 POS 2	174	626	REFL 1 POS 19 2ND LOOK	2753
50	REFL 2 POS 2	16375	628	REFL 2 POS 19 2ND LOOK	2570
52	SCENE DATA BP 2	16208	630	SCENE DATA BP 19	16186
54		16289	632		16289
56		17413	634		17403
58		16778	636		16776
60		16624	638		16624
62		16384	640		16377
64		16446	642		16449
66		15968	644		15970
68		17271	646		17270
70		17034	648		17038
72		19856	650		19821
74		17760	652		17764
76		14866	654		14867
78	REFLECTOR 1 POSITION	323	656	REFLECTOR 1 POSITION 20	2898
80	REFLECTOR 2 POSITION	142	658	REFLECTOR 2 POSITION 20	2717
82	REFL 1 POS 3	326	660	REFL 1 POS 20 2ND LOOK	2904
84	REFL 2 POS 3	148	662	REFL 2 POS 20 2ND LOOK	2722
86	SCENE DATA BP 3	16182	664	SCENE DATA BP 20	16183
88		16283	666		16283
90		17405	668		17409
92		16781	670		16776

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH	16622	672	CH	16622
96	CH	16375	674	CH	16379
98	CH	16451	676	CH	16446
100	CH	15977	678	CH	15965
102	CH	17271	680	CH	17276
104	CH	17041	682	CH	17044
106	CH	19839	684	CH	19832
108	CH	17769	686	CH	17782
110	CH	14870	688	CH	14867
112	REFLECTOR 1 POSITION	474	690	REFLECTOR 1 POSITION	3052
114	REFLECTOR 2 POSITION	296	692	REFLECTOR 2 POSITION	2869
116	REFL 1 POS	478	694	REFL 1 POS	3056
118	REFL 2 POS	300	696	REFL 2 POS	2874
120	SCENE DATA	16184	698	SCENE DATA	16186
122	CH	16281	700	CH	16284
124	CH	17399	702	CH	17405
126	CH	16791	704	CH	16777
128	CH	16622	706	CH	16617
130	CH	16380	708	CH	16378
132	CH	16454	710	CH	16444
134	CH	15981	712	CH	15970
136	CH	17281	714	CH	17278
138	CH	17037	716	CH	17037
140	CH	19819	718	CH	19834
142	CH	17747	720	CH	17775
144	CH	14870	722	CH	14866
146	REFLECTOR 1 POSITION	625	724	REFLECTOR 1 POSITION	3201
148	REFLECTOR 2 POSITION	444	726	REFLECTOR 2 POSITION	3022
150	REFL 1 POS	632	728	REFL 1 POS	3026
152	REFL 2 POS	448	730	REFL 2 POS	3028
154	SCENE DATA	16178	732	SCENE DATA	16179
156	CH	16280	734	CH	16281
158	CH	17402	736	CH	17403
160	CH	16787	738	CH	16778
162	CH	16631	740	CH	16619
164	CH	16379	742	CH	16381
166	CH	16456	744	CH	16445
168	CH	15982	746	CH	15968
170	CH	17273	748	CH	17276
172	CH	17045	750	CH	17036
174	CH	19841	752	CH	19826
176	CH	17772	754	CH	17769
178	CH	14871	756	CH	14866
180	REFLECTOR 1 POSITION	778	758	REFLECTOR 1 POSITION	3351
182	REFLECTOR 2 POSITION	595	760	REFLECTOR 2 POSITION	3172
184	REFL 1 POS	783	762	REFL 1 POS	3357
186	REFL 2 POS	598	764	REFL 2 POS	3178
188	SCENE DATA	16181	766	SCENE DATA	16188
190	CH	16283	768	CH	16286
192	CH	17401	770	CH	17403

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16798	772	CH 6	16778
196	CH 7	16630	774	CH 7	16620
198	CH 8	16378	776	CH 8	16381
200	CH 9	16462	778	CH 9	16446
202	CH 10	15969	780	CH 10	15973
204	CH 11	17287	782	CH 11	17271
206	CH 12	17041	784	CH 12	17031
208	CH 13	19823	786	CH 13	19826
210	CH 14	17750	788	CH 14	17758
212	CH 15	14875	790	CH 15	14866
214	REFLECTOR 1 POSITION	929	792	REFLECTOR 1 POSITION 24	3505
216	REFLECTOR 2 POSITION	748	794	REFLECTOR 2 POSITION 24	3325
218	REFL 1 POS 7	933	796	REFL 1 POS 24 2ND LOOK	3508
220	REFL 2 POS 7	749	798	REFL 2 POS 24 2ND LOOK	3330
222	SCENE DATA BP 7	16189	800	SCENE DATA BP 24	16180
224	CH 3	16286	802	CH 3	16283
226	CH 4	17402	804	CH 4	17409
228	CH 5	16778	806	CH 5	16775
230	CH 6	16622	808	CH 6	16619
232	CH 7	16378	810	CH 7	16378
234	CH 8	16450	812	CH 8	16447
236	CH 9	15969	814	CH 9	15973
238	CH 10	17274	816	CH 10	17271
240	CH 11	17042	818	CH 11	17036
242	CH 12	19824	820	CH 12	19825
244	CH 13	17756	822	CH 13	17763
246	CH 14	14866	824	CH 14	14866
248	CH 15	11078	826	CH 15	3654
250	REFLECTOR 1 POSITION	899	828	REFLECTOR 1 POSITION 25	3475
252	REFLECTOR 2 POSITION	1084	830	REFLECTOR 2 POSITION 25	3659
254	REFL 1 POS 8	903	832	REFL 1 POS 25 2ND LOOK	3480
256	REFL 2 POS 8	16178	834	REFL 2 POS 25 2ND LOOK	16179
258	SCENE DATA BP 8	16285	836	SCENE DATA BP 25	16286
260	CH 3	17403	838	CH 3	17404
262	CH 4	16782	840	CH 4	16777
264	CH 5	16620	842	CH 5	16617
266	CH 6	16378	844	CH 6	16378
268	CH 7	16447	846	CH 7	16450
270	CH 8	15971	848	CH 8	15971
272	CH 9	17266	850	CH 9	17272
274	CH 10	17040	852	CH 10	17037
276	CH 11	19845	854	CH 11	19841
278	CH 12	17780	856	CH 12	17764
280	CH 13	14867	858	CH 13	14867
282	CH 14	12332	860	CH 14	3805
284	CH 15	1052	862	CH 15	3627
286	REFLECTOR 1 POSITION	1236	864	REFLECTOR 1 POSITION 26	3812
288	REFLECTOR 2 POSITION	1054	866	REFLECTOR 2 POSITION 26	3632
290	REFL 1 POS 9	16188	868	REFL 1 POS 26 2ND LOOK	16200
292	REFL 2 POS 9	16285	870	REFL 2 POS 26 2ND LOOK	16292
	SCENE DATA BP 9			SCENE DATA BP 26	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17412	872	CH 5	17407
296	CH 6	16779	874	CH 6	16779
298	CH 7	16617	876	CH 7	16618
300	CH 8	16382	878	CH 8	16386
302	CH 9	16449	880	CH 9	16446
304	CH 10	15964	882	CH 10	15971
306	CH 11	17271	884	CH 11	17276
308	CH 12	17037	886	CH 12	17044
310	CH 13	19844	888	CH 13	19841
312	CH 14	17760	890	CH 14	17751
314	CH 15	14866	892	CH 15	14867
316	REFLECTOR 1 POSITION 10	1385	894	REFLECTOR 1 POSITION 27	3971
318	REFLECTOR 2 POSITION 10	1204	896	REFLECTOR 2 POSITION 27	3781
320	REFL 1 POS 10 2ND LOOK	1389	898	REFL 1 POS 27 2ND LOOK	3971
322	REFL 2 POS 10 2ND LOOK	1205	900	REFL 2 POS 27 2ND LOOK	3785
324	SCENE DATA BP 10	16192	902	SCENE DATA BP 27	16176
326	CH 3	16283	904	CH 3	16287
328	CH 4	17404	906	CH 4	17413
330	CH 5	16777	908	CH 5	16780
332	CH 6	16620	910	CH 6	16620
334	CH 7	16381	912	CH 7	16383
336	CH 8	16450	914	CH 8	16452
338	CH 9	15970	916	CH 9	15969
340	CH 10	17282	918	CH 10	17274
342	CH 11	17037	920	CH 11	17042
344	CH 12	19832	922	CH 12	19836
346	CH 13	17795	924	CH 13	17757
348	CH 14	14867	926	CH 14	14865
350	CH 15	1534	928	CH 15	4110
352	REFLECTOR 1 POSITION 11	1354	930	REFLECTOR 1 POSITION 28	3937
354	REFLECTOR 2 POSITION 11	1540	932	REFLECTOR 2 POSITION 28	4114
356	REFL 1 POS 11 2ND LOOK	1357	934	REFL 1 POS 28 2ND LOOK	3936
358	REFL 2 POS 11 2ND LOOK	16173	936	REFL 2 POS 28 2ND LOOK	16169
360	SCENE DATA BP 11	16280	938	SCENE DATA BP 28	16291
362	CH 3	17412	940	CH 3	17408
364	CH 4	16778	942	CH 4	16776
366	CH 5	16623	944	CH 5	16614
368	CH 6	16385	946	CH 6	16378
370	CH 7	16442	948	CH 7	16443
372	CH 8	15974	950	CH 8	15965
374	CH 9	17271	952	CH 9	17268
376	CH 10	17041	954	CH 10	17040
378	CH 11	19825	956	CH 11	19819
380	CH 12	17756	958	CH 12	17737
382	CH 13	14867	960	CH 13	14864
384	CH 14	1686	962	CH 14	4261
386	CH 15	1507	964	CH 15	4083
388	REFLECTOR 1 POSITION 12	1692	966	REFLECTOR 1 POSITION 29	4267
390	REFLECTOR 2 POSITION 12	1509	968	REFLECTOR 2 POSITION 29	4087
392	REFL 1 POS 12 2ND LOOK	16194	970	REFL 1 POS 29 2ND LOOK	16140
	REFL 2 POS 12 2ND LOOK			REFL 2 POS 29 2ND LOOK	
	SCENE DATA BP 12			SCENE DATA BP 29	
	CH 3			CH 3	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16287	972	CH 4	16312
396	CH 5	17406	974	CH 5	17435
398	CH 6	16779	976	CH 6	16779
400	CH 7	16621	978	CH 7	16622
402	CH 8	16379	980	CH 8	16415
404	CH 9	16446	982	CH 9	16444
406	CH 10	15972	984	CH 10	15968
408	CH 11	17276	986	CH 11	17269
410	CH 12	17039	988	CH 12	17041
412	CH 13	19837	990	CH 13	19834
414	CH 14	17761	992	CH 14	17758
416	CH 15	14867	994	CH 15	14864
418	REFLECTOR 1 POSITION 13	18359	996	REFLECTOR 1 POSITION 30	44139
420	REFLECTOR 2 POSITION 13	16398	998	REFLECTOR 2 POSITION 30	42330
422	REFL 1 POS 13	1843	1000	REFL 1 POS 30	44222
424	REFL 2 POS 13	1661	1002	REFL 2 POS 30	42400
426	SCENE DATA BP 13	16171	1004	SCENE DATA BP 30	16205
428	CH 3	16294	1006	CH 3	16299
430	CH 4	17413	1008	CH 4	17412
432	CH 5	16793	1010	CH 5	16775
434	CH 6	16635	1012	CH 6	16621
436	CH 7	16391	1014	CH 7	16386
438	CH 8	16462	1016	CH 8	16442
440	CH 9	15972	1018	CH 9	15971
442	CH 10	17285	1020	CH 10	17271
444	CH 11	17048	1022	CH 11	17034
446	CH 12	19854	1024	CH 12	19831
448	CH 13	17788	1026	CH 13	17788
450	CH 14	14875	1028	CH 14	14867
452	CH 15	1988	1030	CH 15	6017
454	REFLECTOR 1 POSITION 14	1809	1032	REFLECTOR 1 COLD CAL POS	5834
456	REFLECTOR 2 POSITION 14	1994	1034	REFLECTOR 2 COLD CAL POS	5837
458	REFL 1 POS 14	1812	1036	REFL 1 COLD CAL 2ND LOOK	5834
460	REFL 2 POS 14	16172	1038	REFL 2 COLD CAL 2ND LOOK	16218
462	SCENE DATA BP 14	16290	1040	COLD CAL DATA 1	16289
464	CH 3	17422	1042	CH 3	17411
466	CH 4	16790	1044	CH 4	16775
468	CH 5	16635	1046	CH 5	16620
470	CH 6	16378	1048	CH 6	16390
472	CH 7	16458	1050	CH 7	16445
474	CH 8	15986	1052	CH 8	15972
476	CH 9	17287	1054	CH 9	17270
478	CH 10	17044	1056	CH 10	17036
480	CH 11	19846	1058	CH 11	19826
482	CH 12	17777	1060	CH 12	17760
484	CH 13	14873	1062	CH 13	14865
486	CH 14	2143	1064	CH 14	16225
488	CH 15	1964	1066	CH 15	17411
490	REFLECTOR 1 POSITION 15	2146	1068	REFLECTOR 1 COLD CAL DATA 2	16781
492	REFLECTOR 2 POSITION 15	1964	1070	REFLECTOR 2 COLD CAL DATA 2	16781
	REFL 1 POS 15			REFL 1 COLD CAL 2ND LOOK	
	REFL 2 POS 15			REFL 2 COLD CAL 2ND LOOK	
	SCENE DATA BP 15			COLD CAL DATA 1	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	16196	1072		16620
496		16298	1074		16397
498		17418	1076		16450
500		16794	1078		15972
502		16639	1080		17275
504		16389	1082		17047
506		16466	1084		19825
508		15980	1086		17780
510		17279	1088		14865
512		17038	1082	REFLECTOR 1 WARM CAL POS	10416
514		19835	1184	REFLECTOR 2 WARM CAL POS	10232
516		17778	1186	REFL 1 WARM CAL 2ND LOOK	10416
518		14876	1188	REFL 2 WARM CAL 2ND LOOK	10232
520	REFLECTOR 1 POSITION 16	2294	1190	WARM CAL DATA 1	16180
522	REFLECTOR 2 POSITION 16	2112	1192		16288
524	REFL 1 POS 16 2ND LOOK	2298	1194		17412
526	REFL 2 POS 16 2ND LOOK	2115	1196		16774
528	SCENE DATA BP 16	16230	1198		16613
530		16310	1200		16387
532		17422	1202		16443
534		16792	1204		15968
536		16635	1206		17272
538		16395	1208		17037
540		16463	1210		19819
542		15973	1212		17753
544		17288	1214		14865
546		17039	1216		16182
548		19831	1218		16285
550		17784	1220		17407
552		14872	1222		16773
554	REFLECTOR 1 POSITION 17	2444	1224		16616
556	REFLECTOR 2 POSITION 17	2261	1226		16387
558	REFL 1 POS 17 2ND LOOK	2450	1228		16442
560	REFL 2 POS 17 2ND LOOK	2265	1230		15965
562	SCENE DATA BP 17	16185	1232		17274
564		16291	1234		17028
566		17418	1236		19824
568		16793	1238		17757
570		16632	1240		14863

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
1090	SCAN MOTOR A1-1	17827	23.24	
1092	SCAN MOTOR A1-2	18642	23.61	
1094	FEEDHORN A1-1	18980	24.87	
1096	FEEDHORN A1-2	19457	25.81	
1098	RF MUX A1-1	20027	26.42	
1100	RF MUX A1-2	20618	27.56	
1102	LOCAL OSCILLATOR CHANNEL 3	21526	29.23	
1104	LOCAL OSCILLATOR CHANNEL 4	21515	28.89	
1106	LOCAL OSCILLATOR CHANNEL 5	21257	28.92	
1108	LOCAL OSCILLATOR CHANNEL 6	19996	26.71	
1110	LOCAL OSCILLATOR CHANNEL 7	20445	27.36	
1112	LOCAL OSCILLATOR CHANNEL 8	20659	28.68	
1114	LOCAL OSCILLATOR CHANNEL 15	21216	28.28	
1116	PLL LO #2 CHANNELS 9 THROUGH 14	19960	26.32	
1118	PLL LO #1 CHANNELS 9 THROUGH 14	21809	29.84	
1120	SPARE (NOT USED)	32767	51.27	
1122	MIXER/IF AMPLIFIER CHANNEL 3	21306	28.00	
1124	MIXER/IF AMPLIFIER CHANNEL 4	21261	28.11	
1126	MIXER/IF AMPLIFIER CHANNEL 5	20902	27.81	
1128	MIXER/IF AMPLIFIER CHANNEL 6	20225	26.87	
1130	MIXER/IF AMPLIFIER CHANNEL 7	20223	27.11	
1132	MIXER/IF AMPLIFIER CHANNEL 8	21064	28.06	
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20269	26.46	
1136	MIXER/IF AMPLIFIER CHANNEL 15	20820	28.47	
1138	IF AMPLIFIER CHANNEL 11 THRU 14	20660	27.76	
1140	IF AMPLIFIER CHANNEL 9	20677	27.84	
1142	IF AMPLIFIER CHANNEL 10	20835	27.84	
1144	IF AMPLIFIER CHANNEL 11	20088	26.72	
1146	DC/DC CONVERTER	20731	27.85	
1148	IF AMPLIFIER CHANNEL 13	20110	26.73	
1150	IF AMPLIFIER CHANNEL 14	20216	27.03	
1152	IF AMPLIFIER CHANNEL 12	20006	26.65	
1154	RF SHELF A1-1	19723	26.96	
1156	RF SHELF A1-2	20427	27.47	
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	19033	25.02	
1160	A1-1 WARM LOAD 1	23548	23.43	
1162	A1-1 WARM LOAD 2	23300	23.36	
1164	A1-1 WARM LOAD 3	23537	23.45	
1166	A1-1 WARM LOAD 4	23465	23.39	
1168	A1-1 WARM LOAD CENTER	23552	23.53	
1170	A1-2 WARM LOAD 1	23877	24.48	
1172	A1-2 WARM LOAD 2	24029	24.41	
1174	A1-2 WARM LOAD 3	24189	24.54	
1176	A1-2 WARM LOAD 4	23971	24.57	
1178	A1-2 WARM LOAD CENTER	23859	24.46	
1180	TEMP SENSOR REFERENCE VOLTAGE	25321		

DESCRIPTION

STATUS

STATUS

STATUS

DESCRIPTION	STATUS	STATUS	STATUS
SCANNER A1-1 POWER	ON	ON	ON
SCANNER A1-2 POWER	ON	ON	ON
PLL POWER	ON	ON	ON
ANTENNA IN WARM CAL POSITION MODE	PLLO # 1	PLLO # 1	PLLO # 1
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO
ANTENNA IN NADIR POSITION MODE	NO	NO	NO
ANTENNA IN FULL SCAN MODE	YES	YES	YES
SURVIVAL HEATER POWER	OFF	OFF	OFF
MODULE POWER	CONNECT	CONNECT	CONNECT
COLD CAL POSITION MSB	ZERO	ZERO	ZERO
COLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA

DESCRIPTION

VALUE

DEG C

VALUE

DEG C

VALUE

DEG C

DESCRIPTION	VALUE	DEG C	VALUE	DEG C
A1-1 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0
A1-2 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4
A1-1 RF SHELF TEMPERATURE	216	20.7	215	19.4
A1-2 RF SHELF TEMPERATURE	217	22.1	217	22.1
A1-1 WARM LOAD TEMPERATURE	214	18.0	214	18.0
A1-2 WARM LOAD TEMPERATURE	215	19.4	215	19.4

DESCRIPTION

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

DESCRIPTION	VALUE	AMPS/ VOLTS	VALUE	AMPS/ VOLTS
A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	88	41.01	87	40.54
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	85	39.61	84	39.14
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	170	14.67	169	14.58
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	147	-15.20	146	-15.25
RECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	144	4.80	144	4.80
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76
PHASE LOCK LOOP (CHANNEL 9/14)	145	14.58	169	14.58
PHASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30
L.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 3)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78
PLLO # 2 LOCK DETECT	1	0.02	1	0.02
PLLO # 1 LOCK DETECT	220	4.40	220	4.40
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1	
NO.	DEG K
615	42.00
616	43.00
617	44.00
618	45.00
619	46.00
620	47.00
621	48.00
622	49.00
623	50.00
624	51.00
625	52.00
626	53.00
627	67.00
628	68.00
629	71.00
631	26.00

FIXED TARGET

A1-2	
NO.	DEG K
601	14.00
602	15.00
603	16.00
604	17.00
605	18.00
606	19.00
607	20.00
608	21.00
609	22.00
610	23.00
611	24.00
612	25.00
613	69.00
614	70.00
630	72.00
632	27.00

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

A1-1	
NO.	DEG K
558	5.00
559	6.00
550	7.00
551	8.00
506	57.00
507	58.00
516	59.00
517	60.00
514	1.00
515	2.00
508	63.00
518	64.00
519	3.00
521	9.00
523	65.00
575	73.00
579	75.00

VARIABLE TARGET SHROUD

A1-2	
NO.	DEG K
537	34.00
538	35.00
524	36.00
525	37.00
502	30.00
503	31.00
511	32.00
512	33.00
509	38.00
510	39.00
504	61.00
513	62.00
520	4.00
522	10.00
577	74.00
581	76.00

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

AMSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 11:02:21 SCAN NUMBER 906
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

COMMANDS
[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLLO # 1 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]
POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 3

PLB Post-Low Freq TRANSIENT
3.2.4.2.2.9

S/O: 748613 OP: 0810 1ST CPT
P/N: 1331720-3-II SN: 109

TDS 51

139
T

TEST ENG: (RA) DATE: 11/20/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	11111111	572	SCENE DATA	16383
2	SYNC SEQUENCE	11111111	574	BP	16450
3	SYNC SEQUENCE	11111111	576	17	15987
4	UNIT ID AND SERIAL NO	00100001	578	CH 8	17273
5	DIGITAL B DATA	00000010	580	CH 9	17032
6	DIGITAL B DATA	00001110	582	CH 10	19821
7	DIGITAL B DATA	00000000	584	CH 11	17760
8	DIGITAL B DATA	00000000	586	CH 12	14856
10	REFLECTOR 1 POSITION	16225	588	CH 13	2597
12	REFLECTOR 2 POSITION	16225	590	CH 14	2416
14	REFL 1 POS	16225	592	CH 15	2601
16	REFL 2 POS	16189	594	REFLECTOR 1 POSITION	2419
18	SCENE DATA	16275	596	REFLECTOR 2 POSITION	16182
20	BP	17402	598	REFL 1 POS	16275
22	1	16760	600	REFL 2 POS	17409
24	2	16611	602	BP	16780
26	3	16382	604	18	16625
28	4	16428	606	2ND LOOK	16390
30	5	15956	608	CH 3	16441
32	6	17261	610	CH 4	15961
34	7	17031	612	CH 5	17277
36	8	19811	614	CH 6	17025
38	9	17754	616	CH 7	19801
40	10	14847	618	CH 8	17740
42	11	167	620	CH 9	14857
44	12	16373	622	CH 10	2748
46	13	174	624	CH 11	2568
48	14	16375	626	CH 12	2753
50	15	16200	628	CH 13	2570
52	16	16270	630	CH 14	16177
54	17	17393	632	CH 15	16264
56	18	16760	634	CH 16	17389
58	19	16373	636	CH 17	16761
60	20	16432	638	CH 18	16611
62	21	15955	640	CH 19	16363
64	22	17258	642	CH 20	15959
66	23	17025	644	CH 21	17264
68	24	19811	646	CH 22	17025
70	25	17759	648	CH 23	19801
72	26	14848	650	CH 24	17755
74	27	323	652	CH 25	14848
76	28	143	654	CH 26	2900
78	29	326	656	CH 27	2718
80	30	148	658	CH 28	2905
82	31	16172	660	CH 29	2722
84	32	16260	662	CH 30	16182
86	33	17388	664	CH 31	16260
88	34	16764	666	CH 32	17392
90	35		668	CH 33	16762
92	36		670	CH 34	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16610	672	REFLECTOR 1 POSITION 21	30533
96	CH 8	16361	674	REFLECTOR 2 POSITION 21	2869
98	CH 9	16428	676	REFL 1 POS 21 2ND LOOK	3056
100	CH 10	15959	678	REFL 2 POS 21 2ND LOOK	2874
102	CH 11	17254	680	SCENE DATA BP 21	16180
104	CH 12	17025	682		16260
106	CH 13	19813	684		17393
108	CH 14	17744	686		16766
110	CH 15	14850	688		16609
112	REFLECTOR 1 POSITION 4	474	690		16370
114	REFLECTOR 2 POSITION 4	296	692		16433
116	REFL 1 POS 4 2ND LOOK	478	694		15958
118	REFL 2 POS 4 2ND LOOK	300	696		17261
120	SCENE DATA BP 4	16175	698		17016
122	CH 3	16261	700		19813
124	CH 4	17386	702		17747
126	CH 5	16779	704		14848
128	CH 6	16610	706		3203
130	CH 7	16362	708		3022
132	CH 8	16440	710		3205
134	CH 9	15972	712		3028
136	CH 10	17264	714		16180
138	CH 11	17027	716		16261
140	CH 12	19800	718		17388
142	CH 13	17750	720		16765
144	CH 14	14853	722		16613
146	REFLECTOR 1 POSITION 5	625	724		16368
148	REFLECTOR 2 POSITION 5	444	726		16429
150	REFL 1 POS 5 2ND LOOK	631	728		15955
152	REFL 2 POS 5 2ND LOOK	448	730		17258
154	SCENE DATA BP 5	16173	732		17020
156	CH 3	16261	734		19821
158	CH 4	17386	736		17746
160	CH 5	16770	738		14849
162	CH 6	16620	740		3349
164	CH 7	16361	742		3172
166	CH 8	16440	744		3357
168	CH 9	15972	746		3178
170	CH 10	17259	748		16170
172	CH 11	19832	750		16261
174	CH 12	17759	752		17392
176	CH 13	14853	754		
178	CH 14	777	756		
180	REFLECTOR 1 POSITION 6	595	758		
182	REFLECTOR 2 POSITION 6	781	760		
184	REFL 1 POS 6 2ND LOOK	598	762		
186	REFL 2 POS 6 2ND LOOK	16175	764		
188	SCENE DATA BP 6	16261	766		
190	CH 3	17385	768		
192	CH 4		770		

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16775	772	REFLECTOR 1 POSITION 24	3504
196	CH 7	16620	774	REFLECTOR 2 POSITION 24	3324
198	CH 8	16367	776	REFL 1 POS 24 2ND LOOK	3508
200	CH 9	16444	778	REFL 2 POS 24 2ND LOOK	3330
202	CH 10	15961	780	SCENE DATA BP 24	16178
204	CH 11	17270	782	CH 3	16260
206	CH 12	17030	784	CH 4	17389
208	CH 13	19807	786	CH 5	16610
210	CH 14	17751	788	CH 6	16362
212	CH 15	14857	790	CH 7	16435
214	CH 7	929	792	CH 8	15958
216	REFLECTOR 1 POSITION 7	748	794	CH 9	17259
218	REFLECTOR 2 POSITION 7	933	796	CH 10	17032
220	REFL 1 POS 7 2ND LOOK	749	798	CH 11	17738
222	REFL 2 POS 7 2ND LOOK	16180	800	CH 12	14847
224	SCENE DATA BP 7	16260	802	CH 13	3655
226	CH 3	17388	804	CH 14	3476
228	CH 4	16762	806	CH 15	3659
230	CH 5	16607	808	REFLECTOR 1 POSITION 25	3480
232	CH 6	16367	810	REFLECTOR 2 POSITION 25	16170
234	CH 7	16432	812	REFL 1 POS 25 2ND LOOK	16260
236	CH 8	15954	814	REFL 2 POS 25 2ND LOOK	17388
238	CH 9	17265	816	SCENE DATA BP 25	16610
240	CH 10	17026	818	CH 3	16362
242	CH 11	19822	820	CH 4	15958
244	CH 12	17758	822	CH 5	17259
246	CH 13	14848	824	CH 6	17032
248	CH 14	1080	826	CH 7	17738
250	CH 15	902	828	CH 8	14847
252	REFLECTOR 1 POSITION 8	1084	830	CH 9	3655
254	REFLECTOR 2 POSITION 8	903	832	CH 10	3476
256	REFL 1 POS 8 2ND LOOK	16170	834	CH 11	3659
258	REFL 2 POS 8 2ND LOOK	16262	836	CH 12	3480
260	SCENE DATA BP 8	17390	838	CH 13	16170
262	CH 3	16759	840	CH 14	16260
264	CH 4	16611	842	CH 15	17388
266	CH 5	16363	844	CH 3	16763
268	CH 6	16433	846	CH 4	16610
270	CH 7	15962	848	CH 5	16364
272	CH 8	17256	850	CH 6	16435
274	CH 9	17028	852	CH 7	15958
276	CH 10	19804	854	CH 8	17260
278	CH 11	17737	856	CH 9	17028
280	CH 12	14848	858	CH 10	19813
282	CH 13	1233	860	CH 11	17759
284	CH 14	1053	862	CH 12	14847
286	CH 15	1236	864	CH 13	3804
288	REFLECTOR 1 POSITION 9	1054	866	CH 14	3626
290	REFLECTOR 2 POSITION 9	16177	868	CH 15	3811
292	REFL 1 POS 9 2ND LOOK	16264	870	CH 3	3632
	REFL 2 POS 9 2ND LOOK			CH 4	16189
	SCENE DATA BP 9			CH 5	16272

AMSU A1_33 A1.EXE		DIGITAL A DATA 20-NOV-99		11:02:26		PAGE 4	
		FULL SCAN MODE					
ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE		
294	CH 5	17394	872	REFLECTOR 1 POSITION 27	3970		
296	CH 6	16763	874	REFLECTOR 2 POSITION 27	3780		
298	CH 7	16606	876	REFL 1 POS 27 2ND LOOK	3971		
300	CH 8	16370	878	REFL 2 POS 27 2ND LOOK	3785		
302	CH 9	16427	880	SCENE DATA BP 27	16163		
304	CH 10	15955	882	CH 3	16268		
306	CH 11	17255	884	CH 4	17392		
308	CH 12	17014	886	CH 5	16760		
310	CH 13	19820	888	CH 6	16607		
312	CH 14	17751	890	CH 7	16371		
314	CH 15	14847	892	CH 8	16433		
316	REFLECTOR 1 POSITION 10	1385	894	CH 9	15957		
318	REFLECTOR 2 POSITION 10	1204	896	CH 10	17258		
320	REFL 1 POS 10 2ND LOOK	1389	898	CH 11	17025		
322	REFL 2 POS 10 2ND LOOK	1205	900	CH 12	19805		
324	SCENE DATA BP 10	16187	902	CH 13	17766		
326	CH 3	16261	904	CH 14	14848		
328	CH 4	17388	906	CH 15	3970		
330	CH 5	16759	908	REFLECTOR 1 POSITION 28	4109		
332	CH 6	16608	910	REFLECTOR 2 POSITION 28	3938		
334	CH 7	16365	912	REFL 1 POS 28 2ND LOOK	4114		
336	CH 8	16429	914	REFL 2 POS 28 2ND LOOK	3936		
338	CH 9	15961	916	SCENE DATA BP 28	16158		
340	CH 10	17255	918	CH 3	16271		
342	CH 11	17019	920	CH 4	17391		
344	CH 12	19802	922	CH 5	16764		
346	CH 13	17757	924	CH 6	16610		
348	CH 14	14847	926	CH 7	16362		
350	REFLECTOR 1 POSITION 11	1534	928	CH 8	16433		
352	REFLECTOR 2 POSITION 11	1354	930	CH 9	15955		
354	REFL 1 POS 11 2ND LOOK	1539	932	CH 10	17258		
356	REFL 2 POS 11 2ND LOOK	1357	934	CH 11	17025		
358	SCENE DATA BP 11	16167	936	CH 12	19805		
360	CH 3	16263	938	CH 13	17766		
362	CH 4	17394	940	CH 14	14848		
364	CH 5	16762	942	CH 15	3970		
366	CH 6	16609	944	REFLECTOR 1 POSITION 29	4259		
368	CH 7	16369	946	REFLECTOR 2 POSITION 29	4083		
370	CH 8	16431	948	REFL 1 POS 29 2ND LOOK	4268		
372	CH 9	15961	950	REFL 2 POS 29 2ND LOOK	4088		
374	CH 10	17266	952	SCENE DATA BP 29	16128		
376	CH 11	17025	954	CH 3			
378	CH 12	19816	956	CH 4			
380	CH 13	17750	958	CH 5			
382	CH 14	14847	960	CH 6			
384	CH 15	16846	962	CH 7			
386	REFLECTOR 1 POSITION 12	1506	964	CH 8			
388	REFLECTOR 2 POSITION 12	1691	966	CH 9			
390	REFL 1 POS 12 2ND LOOK	1509	968	CH 10			
392	REFL 2 POS 12 2ND LOOK	16185	970	CH 11			
	SCENE DATA BP 12			CH 12			
	CH 13			CH 13			
	CH 14			CH 14			
	CH 15			CH 15			

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16264	972	CH 4	16289
396	CH 5	17391	974	CH 5	17416
398	CH 6	16762	976	CH 6	16763
400	CH 7	16609	978	CH 7	16610
402	CH 8	16366	980	CH 8	16406
404	CH 9	16430	982	CH 9	16434
406	CH 10	15960	984	CH 10	15955
408	CH 11	17260	986	CH 11	17262
410	CH 12	17017	988	CH 12	17019
412	CH 13	19802	990	CH 13	19812
414	CH 14	17750	992	CH 14	17768
416	CH 15	14847	994	CH 15	14847
418	REFLECTOR 1 POSITION 13	1840	996	REFLECTOR 1 POSITION 30	4419
420	REFLECTOR 2 POSITION 13	1658	998	REFLECTOR 2 POSITION 30	4235
422	REFL 1 POS 13	1843	1000	REFL 1 POS 30	4422
424	REFL 2 POS 13	1660	1002	REFL 2 POS 30	4239
426	SCENE DATA BP 13	16163	1004	SCENE DATA BP 30	16200
428	CH 3	16271	1006	CH 3	16276
430	CH 4	17399	1008	CH 4	17397
432	CH 5	16778	1010	CH 5	16762
434	CH 6	16622	1012	CH 6	16608
436	CH 7	16378	1014	CH 7	16368
438	CH 8	16450	1016	CH 8	16431
440	CH 9	15962	1018	CH 9	15957
442	CH 10	17274	1020	CH 10	17261
444	CH 11	17029	1022	CH 11	17018
446	CH 12	19818	1024	CH 12	19799
448	CH 13	14857	1026	CH 13	17753
450	CH 14	14857	1028	CH 14	14847
452	REFLECTOR 1 POSITION 14	1989	1030	REFLECTOR 1 COLD CAL POS	6016
454	REFLECTOR 2 POSITION 14	1807	1032	REFLECTOR 2 COLD CAL POS	5833
456	REFL 1 POS 14	1994	1034	REFL 1 COLD CAL 2ND LOOK	6016
458	REFL 2 POS 14	1812	1036	REFL 2 COLD CAL 2ND LOOK	5833
460	SCENE DATA BP 14	16164	1038	COLD CAL DATA 1	16216
462	CH 3	16267	1040	CH 3	16268
464	CH 4	17403	1042	CH 4	17396
466	CH 5	16772	1044	CH 5	16764
468	CH 6	16622	1046	CH 6	16607
470	CH 7	16360	1048	CH 7	16381
472	CH 8	16439	1050	CH 8	16431
474	CH 9	15981	1052	CH 9	15955
476	CH 10	17267	1054	CH 10	17260
478	CH 11	17024	1056	CH 11	17020
480	CH 12	19825	1058	CH 12	19789
482	CH 13	17751	1060	CH 13	17755
484	CH 14	14855	1062	CH 14	14846
486	CH 15	2143	1064	CH 15	16211
488	REFLECTOR 1 POSITION 15	1964	1066	REFLECTOR 2 POSITION 15	16271
490	REFL 1 POS 15	2146	1068	REFL 1 POS 30	17395
492	REFL 2 POS 15	1964	1070	REFL 2 POS 30	16763

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	16192	1072		16611
496	CH 3	16275	1074	CH 7	16374
498	CH 4	17400	1076	CH 8	16432
500	CH 5	16778	1078	CH 9	15956
502	CH 6	16629	1080	CH 10	17256
504	CH 7	16375	1082	CH 11	17022
506	CH 8	16452	1084	CH 12	19795
508	CH 9	15966	1086	CH 13	17751
510	CH 10	17270	1088	CH 14	14848
512	CH 11	17028	1182	CH 15	10416
514	CH 12	19801	1184	REFLECTOR 1 WARM CAL POS	10232
516	CH 13	17732	1186	REFLECTOR 2 WARM CAL POS	10416
518	CH 14	14857	1188	REFL 1 WARM CAL 2ND LOOK	10232
520	CH 15	22993	1190	REFL 2 WARM CAL 2ND LOOK	16180
522	REFLECTOR 1 POSITION 16	2112	1192	WARM CAL DATA 1	16267
524	REFLECTOR 2 POSITION 16	2298	1194		17393
526	REFL 1 POS 16 2ND LOOK	2115	1196		16759
528	REFL 2 POS 16 2ND LOOK	16224	1198		16602
530	SCENE DATA BP 16	16291	1200		16369
532	CH 3	17404	1202		16427
534	CH 4	16775	1204		15955
536	CH 5	16623	1206		17257
538	CH 6	16382	1208		17020
540	CH 7	16447	1210		19808
542	CH 8	15959	1212		17736
544	CH 9	17275	1214		14845
546	CH 10	17027	1216		16178
548	CH 11	19810	1218		16264
550	CH 12	17755	1220		17392
552	CH 13	14852	1222		16760
554	CH 14	2444	1224		16603
556	CH 15	2260	1226		16369
558	REFLECTOR 1 POSITION 17	2449	1228		16431
560	REFLECTOR 2 POSITION 17	2265	1230		15952
562	REFL 1 POS 17 2ND LOOK	16174	1232		17254
564	REFL 2 POS 17 2ND LOOK	16272	1234		17027
566	SCENE DATA BP 17	17409	1236		19788
568	CH 3	16776	1238		17730
570	CH 4	16620	1240		14845
	CH 5				
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	REFLECTOR 1 POSITION 17				
	REFLECTOR 2 POSITION 17				
	REFL 1 POS 17 2ND LOOK				
	REFL 2 POS 17 2ND LOOK				
	SCENE DATA BP 17				
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	REFLECTOR 2 POSITION 17				
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	REFL 2 POS 17 2ND LOOK				
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	REFLECTOR 1 POSITION 17				
	REFLECTOR 2 POSITION 17				
	REFL 1 POS 17 2ND LOOK				
	REFL 2 POS 17 2ND LOOK				
	SCENE DATA BP 17				
	CH 3				
	CH 4				
	CH 5				
	CH 6				

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
1090	SCAN MOTOR A1-1	17855	23.30	
1092	SCAN MOTOR A1-2	18661	23.64	
1094	FEEDHORN A1-1	19009	24.92	
1096	FEEDHORN A1-2	19491	25.87	
1098	RF MUX A1-1	20122	26.60	
1100	RF MUX A1-2	20705	27.73	
1102	LOCAL OSCILLATOR CHANNEL 3	21720	29.60	
1104	LOCAL OSCILLATOR CHANNEL 4	21712	29.27	
1106	LOCAL OSCILLATOR CHANNEL 5	21399	29.19	
1108	LOCAL OSCILLATOR CHANNEL 6	20102	26.92	
1110	LOCAL OSCILLATOR CHANNEL 7	20554	27.56	
1112	LOCAL OSCILLATOR CHANNEL 8	20824	28.99	
1114	LOCAL OSCILLATOR CHANNEL 15	21424	28.68	
1116	PLL LO #2 CHANNELS 9 THROUGH 14	19955	26.31	
1118	PLL LO #1 CHANNELS 9 THROUGH 14	22213	30.61	
1120	SPARE (NOT USED)	32767	51.27	
1122	MIXER/IF AMPLIFIER CHANNEL 3	21391	28.16	
1124	MIXER/IF AMPLIFIER CHANNEL 4	21364	28.31	
1126	MIXER/IF AMPLIFIER CHANNEL 5	21005	28.00	
1128	MIXER/IF AMPLIFIER CHANNEL 6	20321	27.06	
1130	MIXER/IF AMPLIFIER CHANNEL 7	20328	27.31	
1132	MIXER/IF AMPLIFIER CHANNEL 8	21181	28.28	
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20332	26.58	
1136	MIXER/IF AMPLIFIER CHANNEL 15	20984	28.78	
1138	MIXER/IF AMPLIFIER CHANNEL 11 THRU 14	20861	28.14	
1140	IF AMPLIFIER CHANNEL 9	20877	28.22	
1142	IF AMPLIFIER CHANNEL 10	21035	28.22	
1144	IF AMPLIFIER CHANNEL 11	20157	26.85	
1146	DC/DC CONVERTER	21094	26.53	
1148	IF AMPLIFIER CHANNEL 13	20180	26.87	
1150	IF AMPLIFIER CHANNEL 14	20285	27.17	
1152	IF AMPLIFIER CHANNEL 12	20075	26.78	
1154	RF SHELF A1-1	19886	27.27	
1156	RF SHELF A1-2	20543	27.69	
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	19085	25.12	
1160	A1-1 WARM LOAD 1	23555	23.44	
1162	A1-1 WARM LOAD 2	23303	23.37	
1164	A1-1 WARM LOAD 3	23533	23.44	
1166	A1-1 WARM LOAD 4	23472	23.40	
1168	A1-1 WARM LOAD CENTER	23560	23.55	
1170	A1-2 WARM LOAD 1	23872	24.47	
1172	A1-2 WARM LOAD 2	24023	24.40	
1174	A1-2 WARM LOAD 3	24185	24.55	
1176	A1-2 WARM LOAD 4	23961	24.55	
1178	A1-2 WARM LOAD CENTER	23851	24.44	
1180	TEMP SENSOR REFERENCE VOLTAGE	25321		

DESCRIPTION

STATUS

STATUS

STATUS

DESCRIPTION	STATUS	STATUS	STATUS
SCANNER A1-1 POWER	ON	ON	ON
SCANNER A1-2 POWER	ON	ON	ON
PLL POWER	ON	ON	ON
ANTENNA IN WARM CAL POSITION MODE	PLLO # 1	PLLO # 1	PLLO # 1
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO
ANTENNA IN NADIR POSITION MODE	NO	NO	NO
ANTENNA IN FULL SCAN MODE	YES	YES	YES
SURVIVAL HEATER POWER	OFF	OFF	OFF
MODULE POWER	CONNECT	CONNECT	CONNECT
COLD CAL POSITION MSB	ZERO	ZERO	ZERO
COLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA

DESCRIPTION	VALUE	DEG C	VALUE	DEG C	VALUE	DEG C
A1-1 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0	214	18.0
A1-2 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4	215	19.4
A1-1 RF SHELF TEMPERATURE	216	20.7	215	19.4	216	20.7
A1-2 RF SHELF TEMPERATURE	217	22.1	217	22.1	217	22.1
A1-1 WARM LOAD TEMPERATURE	214	18.0	214	18.0	214	18.0
A1-2 WARM LOAD TEMPERATURE	215	19.4	215	19.4	215	19.4

DESCRIPTION	VALUE	AMPS/ VOLTS	VALUE	AMPS/ VOLTS	VALUE	AMPS/ VOLTS
A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	87	40.54	88	41.01	88	41.01
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	84	39.14	85	39.61	85	39.61
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	148	-15.15	148	-15.15	148	-15.15
SIGNAL PROCESSING -15 VDC	146	-15.25	146	-15.25	146	-15.25
ANTENNA DRIVE -15 VDC	157	7.85	157	7.85	157	7.85
RECEIVER AMPLIFIER +8 VDC	145	4.83	145	4.83	145	4.83
SIGNAL PROCESSOR +5 VDC	144	4.80	144	4.80	144	4.80
ANTENNA DRIVE +5 VDC	169	9.76	169	9.76	169	9.76
RECEIVER MIXER/IF +10 VDC	169	14.58	169	14.58	169	14.58
PHASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30	145	-15.30
PHASE LOCK LOOP (CHANNEL 9/14)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 7)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 3)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78	171	9.78
PLLO # 2 LOCK DETECT	1	0.02	1	0.02	1	0.02
PLLO # 1 LOCK DETECT	220	4.40	220	4.40	220	4.40
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	57.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

AMSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 10:16:26 SCAN NUMBER 767
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

COMMANDS
[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLLO # 1 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]

POWER [4] ON
SELECT TOUCHSCREEN BUTTON 3 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

PRE - HIGH FREQ. 1.43 Hz PLAS
3.2.4.2.2.9.3

S/O: 748613 O/A: 0810 1ST CPT
P/N: 1331720-3-IT SN: 102

TDS 51

139
T

TEST ENG: (P.21)
DATE: 11/20/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE BYTE 1	11111111	572	SCENE DATA BP 17	CH 8
2	SYNC SEQUENCE BYTE 2	11111111	574		CH 9
3	SYNC SEQUENCE BYTE 3	11111111	576		CH 10
4	UNIT ID AND SERIAL NO	00100001	578		CH 11
5	DIGITAL B DATA BYTE 1	00000010	580		CH 12
6	DIGITAL B DATA BYTE 2	00001110	582		CH 13
7	DIGITAL B DATA BYTE 3	00000000	584		CH 14
8	DIGITAL B DATA BYTE 4	00000000	586		CH 15
10	REFLECTOR 1 POSITION	1622423	588	REFLECTOR 1 POSITION 18	2597
12	REFLECTOR 2 POSITION	1622423	590	REFLECTOR 2 POSITION 18	2416
14	REFL 1 POS 1	1622423	592	REFL 1 POS 18 2ND LOOK	2601
16	REFL 2 POS 1	161511	594	REFL 2 POS 18 2ND LOOK	2419
18	SCENE DATA BP 1	162142	596	SCENE DATA BP 18	16139
20		173522	598		16213
22		167352	600		17362
24		165922	602		16755
26		16346	604		16609
28		16419	606		16353
30		159223	608		16427
32		17180	610		15935
34		16958	612		17194
36		19731	614		16958
38		17658	616		19729
40		14811	618		17641
42		167	620		14821
44	REFLECTOR 1 POSITION 2	16372	622	REFLECTOR 1 POSITION 19	2747
46	REFLECTOR 2 POSITION 2	175	624	REFLECTOR 2 POSITION 19	2568
48	REFL 1 POS 2	16375	626	REFL 1 POS 19 2ND LOOK	2752
50	REFL 2 POS 2	16375	628	REFL 2 POS 19 2ND LOOK	2570
52	SCENE DATA BP 2	16158	630	SCENE DATA BP 19	16134
54		16209	632		16203
56		17347	634		17341
58		16736	636		16734
60		16588	638		16590
62		163229	640		16326
64		16421	642		16419
66		159322	644		15929
68		17186	646		177181
70		16961	648		16952
72		19731	650		19724
74		17656	652		17628
76		14810	654		14811
78	REFLECTOR 1 POSITION 3	323	656	REFLECTOR 1 POSITION 20	2899
80	REFLECTOR 2 POSITION 3	143	658	REFLECTOR 2 POSITION 20	2718
82	REFL 1 POS 3	326	660	REFL 1 POS 20 2ND LOOK	2905
84	REFL 2 POS 3	148	662	REFL 2 POS 20 2ND LOOK	2722
86	SCENE DATA BP 3	16131	664	SCENE DATA BP 20	16132
88		16198	666		16199
90		17337	668		17339
92		16737	670		16734

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH	16594	672	CH	16590
96	CH	16323	674	CH	16325
98	CH	16421	676	CH	16421
100	CH	15937	678	CH	15925
102	CH	17186	680	CH	17184
104	CH	16961	682	CH	16956
106	CH	19739	684	CH	19745
108	CH	17647	686	CH	17647
110	CH	14815	688	CH	14811
112	REFLECTOR 1 POSITION	473	690	REFLECTOR 1 POSITION	3052
114	REFLECTOR 2 POSITION	297	692	REFLECTOR 2 POSITION	2869
116	REFL 1 POS	478	694	REFL 1 POS	3057
118	REFL 2 POS	299	696	REFL 2 POS	2873
120	SCENE DATA	16136	698	SCENE DATA	16125
122	CH	16200	700	CH	16203
124	CH	17338	702	CH	17342
126	CH	16754	704	CH	16735
128	CH	16593	706	CH	16591
130	CH	16324	708	CH	16324
132	CH	16424	710	CH	16422
134	CH	15944	712	CH	15929
136	CH	17189	714	CH	17184
138	CH	16970	716	CH	16954
140	CH	19739	718	CH	19720
142	CH	17645	720	CH	17633
144	CH	14817	722	CH	14811
146	REFLECTOR 1 POSITION	624	724	REFLECTOR 1 POSITION	3201
148	REFLECTOR 2 POSITION	444	726	REFLECTOR 2 POSITION	3022
150	REFL 1 POS	632	728	REFL 1 POS	3205
152	REFL 2 POS	448	730	REFL 2 POS	3027
154	SCENE DATA	16126	732	SCENE DATA	16127
156	CH	16201	734	CH	16200
158	CH	17341	736	CH	17339
160	CH	16745	738	CH	16736
162	CH	16600	740	CH	16588
164	CH	16325	742	CH	16328
166	CH	16431	744	CH	16416
168	CH	15945	746	CH	15928
170	CH	17180	748	CH	17179
172	CH	16963	750	CH	16958
174	CH	19744	752	CH	19738
176	CH	17655	754	CH	17654
178	CH	14816	756	CH	14809
180	REFLECTOR 1 POSITION	778	758	REFLECTOR 1 POSITION	3350
182	REFLECTOR 2 POSITION	595	760	REFLECTOR 2 POSITION	3171
184	REFL 1 POS	782	762	REFL 1 POS	3357
186	REFL 2 POS	598	764	REFL 2 POS	3177
188	SCENE DATA	16134	766	SCENE DATA	16129
190	CH	16198	768	CH	16198
192	CH	17338	770	CH	17340

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16752	772	REFLECTOR 1 POSITION 24	16731
196	CH 7	16604	774	REFLECTOR 2 POSITION 24	16591
198	CH 8	16321	776	REFL 1 POS 24	16328
200	CH 9	16436	778	REFL 2 POS 24	16417
202	CH 10	15936	780	SCENE DATA BP 24	15928
204	CH 11	17190	782		17188
206	CH 12	16958	784		16954
208	CH 13	19724	786		19725
210	CH 14	17644	788		17657
212	CH 15	14824	790		14810
214	REFLECTOR 1 POSITION 7	928	792		3505
216	REFLECTOR 2 POSITION 7	749	794		3325
218	REFL 1 POS 7	933	796		3508
220	REFL 2 POS 7	749	798		3329
222	SCENE DATA BP 7	16138	800		16128
224	CH 3	16202	802		16200
226	CH 4	17339	804		17341
228	CH 5	16734	806		16733
230	CH 6	16588	808		16585
232	CH 7	16325	810		16322
234	CH 8	16424	812		16420
236	CH 9	15923	814		15932
238	CH 10	17184	816		17181
240	CH 11	16960	818		16951
242	CH 12	19719	820		19735
244	CH 13	17635	822		17654
246	CH 14	14811	824		14810
248	CH 15	10800	826		3653
250	REFLECTOR 1 POSITION 8	1899	828		3475
252	REFLECTOR 2 POSITION 8	1085	830		3659
254	REFL 1 POS 8	903	832		3480
256	REFL 2 POS 8	16129	834		16124
258	SCENE DATA BP 8	16199	836		16200
260	CH 3	17341	838		17339
262	CH 4	16736	840		16737
264	CH 5	16589	842		16591
266	CH 6	16326	844		16323
268	CH 7	16427	846		16419
270	CH 8	15931	848		15933
272	CH 9	17181	850		17184
274	CH 10	16957	852		16959
276	CH 11	19744	854		19712
278	CH 12	17649	856		17661
280	CH 13	14812	858		14809
282	CH 14	12333	860		3806
284	REFLECTOR 1 POSITION 9	1052	862		3627
286	REFLECTOR 2 POSITION 9	1236	864		3811
288	REFL 1 POS 9	1054	866		3632
290	REFL 2 POS 9	16130	868		16146
292	SCENE DATA BP 9	16206	870		16206

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17342	872	CH 5	17340
296	CH 6	16737	874	CH 6	16731
298	CH 7	16587	876	CH 7	16588
300	CH 8	16324	878	CH 8	16329
302	CH 9	16419	880	CH 9	16418
304	CH 10	15930	882	CH 10	15925
306	CH 11	17180	884	CH 11	17179
308	CH 12	16961	886	CH 12	16954
310	CH 13	19742	888	CH 13	19720
312	CH 14	17632	890	CH 14	17675
314	CH 15	14810	892	CH 15	14809
316	REFLECTOR 1 POSITION 10	1385	894	REFLECTOR 1 POSITION 27	3969
318	REFLECTOR 2 POSITION 10	1205	896	REFLECTOR 2 POSITION 27	3780
320	REFL 1 POS 10 2ND LOOK	1389	898	REFL 1 POS 27 2ND LOOK	3972
322	REFL 2 POS 10 2ND LOOK	1205	900	REFL 2 POS 27 2ND LOOK	3785
324	SCENE DATA BP 10	16139	902	SCENE DATA BP 27	16127
326	CH 3	16200	904	CH 3	16210
328	CH 4	17340	906	CH 4	17351
330	CH 5	16732	908	CH 5	16733
332	CH 6	16588	910	CH 6	16590
334	CH 7	16322	912	CH 7	16324
336	CH 8	16416	914	CH 8	16417
338	CH 9	15922	916	CH 9	15926
340	CH 10	17190	918	CH 10	17183
342	CH 11	16955	920	CH 11	16959
344	CH 12	19736	922	CH 12	19733
346	CH 13	17641	924	CH 13	17654
348	CH 14	14811	926	CH 14	14810
350	REFLECTOR 1 POSITION 11	15335	928	REFLECTOR 1 POSITION 28	4110
352	REFLECTOR 2 POSITION 11	1356	930	REFLECTOR 2 POSITION 28	3935
354	REFL 1 POS 11 2ND LOOK	1539	932	REFL 1 POS 28 2ND LOOK	4114
356	REFL 2 POS 11 2ND LOOK	1357	934	REFL 2 POS 28 2ND LOOK	3936
358	SCENE DATA BP 11	16119	936	SCENE DATA BP 28	16114
360	CH 3	16201	938	CH 3	16209
362	CH 4	17346	940	CH 4	17345
364	CH 5	16737	942	CH 5	16732
366	CH 6	16588	944	CH 6	16591
368	CH 7	16327	946	CH 7	16323
370	CH 8	16421	948	CH 8	16415
372	CH 9	15937	950	CH 9	15927
374	CH 10	17183	952	CH 10	17180
376	CH 11	16961	954	CH 11	16961
378	CH 12	19710	956	CH 12	19713
380	CH 13	17659	958	CH 13	17660
382	CH 14	14812	960	CH 14	14809
384	REFLECTOR 1 POSITION 12	1686	962	REFLECTOR 1 POSITION 29	4260
386	REFLECTOR 2 POSITION 12	1506	964	REFLECTOR 2 POSITION 29	4082
388	REFL 1 POS 12 2ND LOOK	1692	966	REFL 1 POS 29 2ND LOOK	4266
390	REFL 2 POS 12 2ND LOOK	1509	968	REFL 2 POS 29 2ND LOOK	4087
392	SCENE DATA BP 12	16142	970	SCENE DATA BP 29	16092

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16204	972	REFLECTOR 1 POSITION 30	16239
396	CH 5	17338	974	REFLECTOR 2 POSITION 30	17385
398	CH 6	16735	976	REFL 1 POS 30 2ND LOOK	16735
400	CH 7	16589	978	REFL 2 POS 30 2ND LOOK	16587
402	CH 8	16327	980	SCENE DATA BP 30	16369
404	CH 9	16420	982	CH 3	16416
406	CH 10	15933	984	CH 4	15928
408	CH 11	17186	986	CH 5	17182
410	CH 12	16961	988	CH 6	16961
412	CH 13	19727	990	CH 7	19732
414	CH 14	17641	992	CH 8	17644
416	CH 15	14811	994	CH 9	14810
418	REFLECTOR 1 POSITION 13	18339	996	REFLECTOR 1 COLD CAL POS	4420
420	REFLECTOR 2 POSITION 13	1658	998	REFLECTOR 2 COLD CAL POS	4234
422	REFL 1 POS 13 2ND LOOK	1842	1000	REFL 1 COLD CAL 2ND LOOK	4422
424	REFL 2 POS 13 2ND LOOK	1660	1002	REFL 2 COLD CAL 2ND LOOK	4240
426	SCENE DATA BP 13	16121	1004	COLD CAL DATA 1	16157
428	CH 3	16212	1006	CH 3	16220
430	CH 4	17352	1008	CH 4	17348
432	CH 5	16750	1010	CH 5	16732
434	CH 6	16605	1012	CH 6	16587
436	CH 7	16337	1014	CH 7	16336
438	CH 8	16441	1016	CH 8	16418
440	CH 9	15933	1018	CH 9	15927
442	CH 10	17206	1020	CH 10	17185
444	CH 11	16976	1022	CH 11	16961
446	CH 12	19743	1024	CH 12	19730
448	CH 13	17660	1026	CH 13	17639
450	CH 14	14821	1028	CH 14	14810
452	CH 15	1989	1030	REFLECTOR 1 COLD CAL POS	6016
454	REFLECTOR 1 POSITION 14	1809	1032	REFLECTOR 2 COLD CAL POS	5833
456	REFL 1 POS 14 2ND LOOK	1995	1034	REFL 1 COLD CAL 2ND LOOK	6016
458	REFL 2 POS 14 2ND LOOK	1812	1036	REFL 2 COLD CAL 2ND LOOK	5833
460	SCENE DATA BP 14	16121	1038	COLD CAL DATA 1	16175
462	CH 3	16207	1040	CH 3	16214
464	CH 4	17359	1042	CH 4	17345
466	CH 5	16746	1044	CH 5	16731
468	CH 6	16602	1046	CH 6	16585
470	CH 7	16323	1048	CH 7	16340
472	CH 8	16428	1050	CH 8	16415
474	CH 9	15954	1052	CH 9	15925
476	CH 10	17195	1054	CH 10	17185
478	CH 11	16961	1056	CH 11	16965
480	CH 12	19728	1058	CH 12	19722
482	CH 13	17656	1060	CH 13	17659
484	CH 14	14820	1062	CH 14	14811
486	CH 15	2142	1064	CH 15	16174
488	REFLECTOR 1 POSITION 15	1962	1066	COLD CAL DATA 2	16212
490	REFLECTOR 2 POSITION 15	2146	1068	CH 3	17348
492	REFL 1 POS 15 2ND LOOK	2146	1070	CH 4	16736
	REFL 2 POS 15 2ND LOOK	1964		CH 5	

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	3	1072	REFLECTOR 1 WARM CAL POS	16586
496		4	1074	REFLECTOR 2 WARM CAL POS	16345
498		5	1076	REFL 1 WARM CAL 2ND LOOK	16420
500		6	1078	REFL 2 WARM CAL 2ND LOOK	15926
502		7	1080	WARM CAL DATA 1	17181
504		8	1082		16949
506		9	1084		19703
508		10	1086		17653
510		11	1088		14809
512		12	1089		10416
514		13	1090		10232
516		14	1091		10416
518		15	1092		10232
520	REFLECTOR 1 POSITION 16	16	1093		16125
522	REFLECTOR 2 POSITION 16	16	1094		16196
524	REFL 1 POS 16	16	1095		17334
526	REFL 2 POS 16	16	1096		16725
528	SCENE DATA BP 16	16	1097		16578
530		3	1098		16326
532		4	1099		16411
534		5	1100		15923
536		6	1101		17173
538		7	1102		16954
540		8	1103		17660
542		9	1104		14805
544		10	1105		16129
546		11	1106		16199
548		12	1107		17333
550		13	1108		16726
552		14	1109		16581
554	REFLECTOR 1 POSITION 17	17	1110		16324
556	REFLECTOR 2 POSITION 17	17	1111		16412
558	REFL 1 POS 17	17	1112		15920
560	REFL 2 POS 17	17	1113		17175
562	SCENE DATA BP 17	17	1114		16953
564		3	1115		19704
566		4	1116		17645
568		5	1117		14806
570		6	1118		

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
090	SCAN MOTOR A1-1	17804	23.20	20
092	SCAN MOTOR A1-2	18662	23.65	25
094	FEEDHORN A1-1	19176	25.24	24
096	FEEDHORN A1-2	19905	26.66	25
098	RF MUX A1-1	20466	27.25	22
100	RF MUX A1-2	21332	28.92	24
102	LOCAL OSCILLATOR CHANNEL 3	22265	30.64	33
104	LOCAL OSCILLATOR CHANNEL 4	22266	30.33	19
106	LOCAL OSCILLATOR CHANNEL 5	21922	30.19	18
108	LOCAL OSCILLATOR CHANNEL 6	20240	27.18	25
110	LOCAL OSCILLATOR CHANNEL 7	20916	28.25	02
112	LOCAL OSCILLATOR CHANNEL 8	21358	30.02	60
114	LOCAL OSCILLATOR CHANNEL 15	21905	29.60	87
116	PLL LO #2 CHANNELS 9 THROUGH 14	20776	27.87	54
118	PLL LO #1 CHANNELS 9 THROUGH 14	22700	31.27	34
120	SPARE (NOT USED)	32767	29.34	22
122	MIXER/IF AMPLIFIER CHANNEL 3	22008	29.54	22
124	MIXER/IF AMPLIFIER CHANNEL 4	22007	29.22	71
126	MIXER/IF AMPLIFIER CHANNEL 5	21641	27.71	08
128	MIXER/IF AMPLIFIER CHANNEL 6	20665	28.51	19
130	MIXER/IF AMPLIFIER CHANNEL 7	20733	27.19	58
132	MIXER/IF AMPLIFIER CHANNEL 8	21822	29.07	16
134	MIXER/IF AMPLIFIER CH 9 THRU 14	20654	29.17	33
136	MIXER/IF AMPLIFIER CHANNEL 15	21401	27.64	25
138	IF AMPLIFIER CHANNEL 11 THRU 14	21349	28.82	27
140	IF AMPLIFIER CHANNEL 9	21369	25.57	14
142	IF AMPLIFIER CHANNEL 10	21528	23.14	08
144	IF AMPLIFIER CHANNEL 11	20408	23.16	11
146	DC/DC CONVERTER	21860	23.23	25
148	IF AMPLIFIER CHANNEL 13	20426	27.33	64
150	IF AMPLIFIER CHANNEL 14	20533	27.25	33
152	IF AMPLIFIER CHANNEL 12	20324	27.64	25
154	RF SHELF A1-1	20390	28.23	22
156	RF SHELF A1-2	21134	28.82	27
158	DETECTOR/PREAMPLIFIER ASSEMBLY	19323	25.57	14
160	A1-1 WARM LOAD 1	23404	23.14	08
162	A1-1 WARM LOAD 2	23156	23.16	11
164	A1-1 WARM LOAD 3	23386	23.23	25
166	A1-1 WARM LOAD 4	23320	23.11	25
168	A1-1 WARM LOAD CENTER	23405	24.21	15
170	A1-2 WARM LOAD 1	23743	24.15	28
172	A1-2 WARM LOAD 2	23895	24.31	19
174	A1-2 WARM LOAD 3	24057	24.19	20
176	A1-2 WARM LOAD 4	23838	24.31	19
178	A1-2 WARM LOAD CENTER	23724	24.19	20
180	TEMP SENSOR REFERENCE VOLTAGE	25322		

DESCRIPTION

STATUS

STATUS

STATUS

SCANNER A1-1 POWER	ON		ON	
SCANNER A1-2 POWER	ON		ON	
ALL POWER	PLLO # 1	PLLO # 1	PLLO # 1	
ANTENNA IN WARM CAL POSITION MODE	NO	NO	NO	
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO	
ANTENNA IN NADIR POSITION MODE	NO	NO	NO	
ANTENNA IN FULL SCAN MODE	YES	YES	YES	
SURVIVAL HEATER POWER	OFF	OFF	OFF	
MODULE POWER	CONNECT	CONNECT	CONNECT	
COLD CAL POSITION MSB	ZERO	ZERO	ZERO	
COLD CAL POSITION LSB	ZERO	ZERO	ZERO	

ANALOG DATA

DESCRIPTION

VALUE

DEG C

VALUE

DEG C

VALUE

DEG C

A1-1 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0
A1-2 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4
A1-1 RF SHELF TEMPERATURE	216	20.7	216	20.7
A1-2 RF SHELF TEMPERATURE	218	23.4	218	23.4
A1-1 WARM LOAD TEMPERATURE	214	18.0	214	18.0
A1-2 WARM LOAD TEMPERATURE	215	19.4	215	19.4

DESCRIPTION

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	88	41.01	88	41.01
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	85	39.61	85	39.61
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	170	14.67	170	14.67
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	146	-15.25	146	-15.25
RECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	144	4.80	144	4.80
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76
BASE LOCK LOOP (CHANNEL 9/14)	170	14.67	170	14.67
BASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30

0. VOLTAGE	171	9.78	171	9.78
0. VOLTAGE	171	9.78	171	9.78
0. VOLTAGE	172	9.84	172	9.84
0. VOLTAGE	171	9.78	171	9.78
0. VOLTAGE	172	9.84	172	9.84
0. VOLTAGE	171	9.78	171	9.78

0. VOLTAGE	171	9.78	171	9.78
0. VOLTAGE	171	9.78	171	9.78
0. VOLTAGE	171	9.78	171	9.78
0. VOLTAGE	171	9.78	171	9.78
0. VOLTAGE	171	9.78	171	9.78

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0. VOLTAGE	171	9.78	171	9.78
0. VOLTAGE	171	9.78	171	9.78
0. VOLTAGE	171	9.78	171	9.78
0. VOLTAGE	171	9.78	171	9.78

PRT TEMPERATURES

ARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

IXED TARGET

ASEPLATE

THERMOCOUPLE TEMPERATURES

IXED TARGET SHROUD

ARIABLE TARGET SHROUD

IXED TARGET N2

ARIABLE TARGET N2

EATER N2

IXED TARGET FLOW METER

ARIABLE TARGET FLOW METER

ASEPLATE HEATER N2

ASEPLATE N2

ASEPLATE FLOW METER

DJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

MSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 10:20:32 SCAN NUMBER 798
5] DIGITAL A DATA ELEMENT 0000
6] DIGITAL B DATA ELEMENT 00
7] ANALOG DATA ELEMENT 00

COMMANDS
9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL # 1 [18]
13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]
POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 3

Post - HIGH FREQ. 1.43 Hz PLB
3.2.4.2.2.9.3

310: 748613 OP: 0810 1ST CPT TDS 51
SN: 1331720-3-II SN: 109
TEST ENG: (24) DAF 11/20/99
(139/7)

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	11111111	572	SCENE DATA	16333
2	SYNC SEQUENCE	11111111	574	BP	16420
3	SYNC SEQUENCE	11111111	576		15950
4	UNIT ID AND SERIAL NO	00100001	578		17197
5	DIGITAL B DATA	00000010	580		16962
6	DIGITAL B DATA	00001110	582		19752
7	DIGITAL B DATA	00000000	584		17666
8	DIGITAL B DATA	00000000	586		14800
10	REFLECTOR 1 POSITION	16225	588	REFLECTOR 1 POSITION	2597
12	REFLECTOR 2 POSITION	16225	590	REFLECTOR 2 POSITION	2416
14	REFL 1 POS	16225	592	REFL 1 POS	2601
16	REFL 2 POS	16140	594	REFL 2 POS	2419
18	SCENE DATA	16197	596	SCENE DATA	16131
20		17339	598		16195
22		16721	600		17354
24		16579	602		16744
26		16332	604		16597
28		16399	606		16345
30		15914	608		16415
32		17168	610		15918
34		16944	612		17190
36		19704	614		16944
38		17638	616		19698
40		14788	618		17627
42		16371	620		14800
44	REFLECTOR 1 POSITION	16371	622	REFLECTOR 1 POSITION	2749
46	REFLECTOR 2 POSITION	174	624	REFLECTOR 2 POSITION	2567
48	REFL 1 POS	16375	626	REFL 1 POS	2752
50	REFL 2 POS	16144	628	REFL 2 POS	2571
52	SCENE DATA	16187	630	SCENE DATA	16114
54		17334	632		16180
56		16719	634		17328
58		16576	636		16721
60		16327	638		16578
62		16408	640		16312
64		15914	642		16401
66		17179	644		15913
68		16940	646		17165
70		19717	648		16940
72		17649	650		19719
74		14788	652		17617
76		324	654		14790
78	REFLECTOR 1 POSITION	142	656	REFLECTOR 1 POSITION	2899
80	REFLECTOR 2 POSITION	326	658	REFLECTOR 2 POSITION	2717
82	REFL 1 POS	148	660	REFL 1 POS	2905
84	REFL 2 POS	16113	662	REFL 2 POS	2721
86	SCENE DATA	16179	664	SCENE DATA	16117
88		17330	666		16180
90		16726	668		17324
92			670		16719

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16580	672	CH 7	16574
96	CH 8	16309	674	CH 8	16314
98	CH 9	16405	676	CH 9	16402
100	CH 10	15927	678	CH 10	15909
102	CH 11	17171	680	CH 11	17173
104	CH 12	16945	682	CH 12	16938
106	CH 13	19722	684	CH 13	19724
108	CH 14	17634	686	CH 14	17634
110	CH 15	14793	688	CH 15	14788
112	REFLECTOR 1 POSITION 4	474	690	REFLECTOR 1 POSITION 21	3052
114	REFLECTOR 2 POSITION 4	297	692	REFLECTOR 2 POSITION 21	2869
116	REFL 1 POS 4	478	694	REFL 1 POS 21	3057
118	REFL 2 POS 4	299	696	REFL 2 POS 21	2874
120	SCENE DATA BP 4		698	SCENE DATA BP 21	16117
122	CH 3	16117	700	CH 3	16117
124	CH 4	16178	702	CH 4	16181
126	CH 5	17324	704	CH 5	17327
128	CH 6	16739	706	CH 6	16719
130	CH 7	16586	708	CH 7	16576
132	CH 8	16314	710	CH 8	16311
134	CH 9	16412	712	CH 9	16402
136	CH 10	15932	714	CH 10	15918
138	CH 11	17179	716	CH 11	17170
140	CH 12	16934	718	CH 12	16933
142	CH 13	19703	720	CH 13	19696
144	CH 14	17639	722	CH 14	17606
146	CH 15	14794	724	CH 15	14788
148	REFLECTOR 1 POSITION 5	625	726	REFLECTOR 1 POSITION 22	3202
150	REFLECTOR 2 POSITION 5	444	728	REFLECTOR 2 POSITION 22	3023
152	REFL 1 POS 5	631	730	REFL 1 POS 22	3206
154	REFL 2 POS 5	448	732	REFL 2 POS 22	3026
156	SCENE DATA BP 5		734	SCENE DATA BP 22	16117
158	CH 3	16180	736	CH 3	16180
160	CH 4	17324	738	CH 4	17324
162	CH 5	16734	740	CH 5	16718
164	CH 6	16591	742	CH 6	16575
166	CH 7	16314	744	CH 7	16313
168	CH 8	16414	746	CH 8	16401
170	CH 9	15934	748	CH 9	15912
172	CH 10	17179	750	CH 10	17169
174	CH 11	16954	752	CH 11	16941
176	CH 12	19722	754	CH 12	19712
178	CH 13	17645	756	CH 13	17648
180	CH 14	14796	758	CH 14	14788
182	CH 15	778	760	CH 15	3351
184	REFLECTOR 1 POSITION 6	598	762	REFLECTOR 1 POSITION 23	3171
186	REFLECTOR 2 POSITION 6	782	764	REFLECTOR 2 POSITION 23	3356
188	REFL 1 POS 6	598	766	REFL 1 POS 23	3177
190	REFL 2 POS 6		768	REFL 2 POS 23	16112
192	SCENE DATA BP 6		770	SCENE DATA BP 23	16183
	CH 3	16113		CH 3	17327
	CH 4	16182		CH 4	
	CH 5	17326		CH 5	

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16742	772	REFLECTOR 1 POSITION 24	16717
196	CH 7	16594	774	REFLECTOR 2 POSITION 24	16575
198	CH 8	16312	776	REFL 1 POS 24 2ND LOOK	16312
200	CH 9	16419	778	REFL 2 POS 24 2ND LOOK	16398
202	CH 10	15925	780	SCENE DATA BP 24	15911
204	CH 11	17185	782		17169
206	CH 12	16958	784		16937
208	CH 13	19722	786		19693
210	CH 14	17637	788		17621
212	CH 15	14801	790		14787
214	REFLECTOR 1 POSITION 7	929	792		3504
216	REFLECTOR 2 POSITION 7	748	794		3325
218	REFL 1 POS 7 2ND LOOK	933	796		3509
220	REFL 2 POS 7 2ND LOOK	749	798		3330
222	SCENE DATA BP 7	16124	800		16115
224	CH 3	16181	802		16182
226	CH 4	17324	804		17328
228	CH 5	16722	806		16718
230	CH 6	16579	808		16576
232	CH 7	16312	810		16309
234	CH 8	16409	812		16395
236	CH 9	15912	814		15917
238	CH 10	17178	816		17169
240	CH 11	16947	818		16944
242	CH 12	19703	820		19698
244	CH 13	17654	822		17635
246	CH 14	14790	824		14789
248	CH 15	1079	826		3652
250	REFLECTOR 1 POSITION 8	898	828		3475
252	REFLECTOR 2 POSITION 8	1085	830		3659
254	REFL 1 POS 8 2ND LOOK	903	832		3480
256	REFL 2 POS 8 2ND LOOK	16112	834		16106
258	SCENE DATA BP 8	16179	836		16181
260	CH 3	17327	838		17327
262	CH 4	16724	840		16719
264	CH 5	16582	842		16577
266	CH 6	16312	844		16317
268	CH 7	16404	846		16399
270	CH 8	15921	848		15913
272	CH 9	17169	850		17170
274	CH 10	16949	852		16939
276	CH 11	19712	854		19710
278	CH 12	17639	856		17630
280	CH 13	14790	858		14788
282	CH 14	1233	860		3806
284	REFLECTOR 1 POSITION 9	1050	862		3628
286	REFLECTOR 2 POSITION 9	1236	864		3813
288	REFL 1 POS 9 2ND LOOK	1054	866		3633
290	REFL 2 POS 9 2ND LOOK	16115	868		16128
292	SCENE DATA BP 9	16185	870		16188

LEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17334	872	CH 5	17331
296	CH 6	16723	874	CH 6	16719
298	CH 7	16577	876	CH 7	16576
300	CH 8	16316	878	CH 8	16312
302	CH 9	16399	880	CH 9	16405
304	CH 10	15916	882	CH 10	15918
306	CH 11	17172	884	CH 11	17175
308	CH 12	16950	886	CH 12	16932
310	CH 13	19704	888	CH 13	19703
312	CH 14	17641	890	CH 14	17621
314	CH 15	14789	892	CH 15	14788
316	REFLECTOR 1 POSITION 10	1385	894	REFLECTOR 1 POSITION 27	3971
318	REFLECTOR 2 POSITION 10	1204	896	REFLECTOR 2 POSITION 27	3780
320	REFL 1 POS 10 2ND LOOK	1389	898	REFL 1 POS 27 2ND LOOK	3971
322	REFL 2 POS 10 2ND LOOK	1205	900	REFL 2 POS 27 2ND LOOK	3785
324	SCENE DATA BP 10	16126	902	SCENE DATA BP 27	16108
326	CH 3	16183	904	CH 3	16185
328	CH 4	17326	906	CH 4	17334
330	CH 5	16718	908	CH 5	16717
332	CH 6	16575	910	CH 6	16576
334	CH 7	16311	912	CH 7	16315
336	CH 8	16402	914	CH 8	16398
338	CH 9	15909	916	CH 9	15909
340	CH 10	17172	918	CH 10	17172
342	CH 11	16945	920	CH 11	16946
344	CH 12	19704	922	CH 12	19717
346	CH 13	17641	924	CH 13	17649
348	CH 14	14788	926	CH 14	14787
350	CH 15	1534	928	CH 15	4110
352	REFLECTOR 1 POSITION 11	1355	930	REFLECTOR 1 POSITION 28	3938
354	REFLECTOR 2 POSITION 11	1539	932	REFLECTOR 2 POSITION 28	4116
356	REFL 1 POS 11 2ND LOOK	1356	934	REFL 1 POS 28 2ND LOOK	3935
358	REFL 2 POS 11 2ND LOOK	16101	936	REFL 2 POS 28 2ND LOOK	16102
360	SCENE DATA BP 11	16182	938	SCENE DATA BP 28	16192
362	CH 3	17331	940	CH 3	17330
364	CH 4	16724	942	CH 4	16715
366	CH 5	16575	944	CH 5	16574
368	CH 6	16316	946	CH 6	16310
370	CH 7	16404	948	CH 7	16399
372	CH 8	15916	950	CH 8	15910
374	CH 9	17178	952	CH 9	17171
376	CH 10	16943	954	CH 10	16936
378	CH 11	19696	956	CH 11	19699
380	CH 12	17614	958	CH 12	17615
382	CH 13	14789	960	CH 13	14787
384	CH 14	1687	962	CH 14	4259
386	REFLECTOR 1 POSITION 12	1507	964	REFLECTOR 1 POSITION 29	4083
388	REFLECTOR 2 POSITION 12	1691	966	REFLECTOR 2 POSITION 29	4267
390	REFL 1 POS 12 2ND LOOK	1509	968	REFL 1 POS 29 2ND LOOK	4087
392	REFL 2 POS 12 2ND LOOK	16131	970	REFL 2 POS 29 2ND LOOK	16080
	SCENE DATA BP 12			SCENE DATA BP 29	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16184	972	REFLECTOR 1 POSITION 30	16219
396	CH 5	17326	974	REFLECTOR 2 POSITION 30	17371
398	CH 6	16723	976	REFL 1 POS 30 2ND LOOK	16720
400	CH 7	16575	978	REFL 2 POS 30 2ND LOOK	16572
402	CH 8	16312	980	SCENE DATA BP 30	16363
404	CH 9	16403	982	CH 3	16398
406	CH 10	15916	984	CH 4	15911
408	CH 11	17172	986	CH 5	17172
410	CH 12	16932	988	CH 6	16935
412	CH 13	19706	990	CH 7	19698
414	CH 14	17633	992	CH 8	17642
416	CH 15	14789	994	CH 9	14787
418	REFLECTOR 1 POSITION 13	1840	996	REFLECTOR 1 POSITION 30	4419
420	REFLECTOR 2 POSITION 13	1658	998	REFLECTOR 2 POSITION 30	4236
422	REFL 1 POS 13 2ND LOOK	1843	1000	REFL 1 POS 30 2ND LOOK	4422
424	REFL 2 POS 13 2ND LOOK	1660	1002	REFL 2 POS 30 2ND LOOK	4239
426	SCENE DATA BP 13	16109	1004	CH 10	16136
428	CH 3	16194	1006	CH 11	16200
430	CH 4	17340	1008	CH 12	17337
432	CH 5	16742	1010	CH 13	16719
434	CH 6	16592	1012	CH 14	16577
436	CH 7	16329	1014	CH 15	16320
438	CH 8	16419	1016	CH 16	16403
440	CH 9	15922	1018	CH 17	15914
442	CH 10	17195	1020	CH 18	17165
444	CH 11	16960	1022	CH 19	16935
446	CH 12	19715	1024	CH 20	19699
448	CH 13	17638	1026	CH 21	17633
450	CH 14	14800	1028	CH 22	14787
452	CH 15	1988	1030	REFLECTOR 1 COLD CAL POS	6017
454	REFLECTOR 1 POSITION 14	1808	1032	REFLECTOR 2 COLD CAL POS	5833
456	REFL 1 POS 14 2ND LOOK	1994	1034	REFL 1 COLD CAL 2ND LOOK	6017
458	REFL 2 POS 14 2ND LOOK	1813	1036	REFL 2 COLD CAL 2ND LOOK	5833
460	SCENE DATA BP 14	16111	1038	COLD CAL DATA 1	16163
462	CH 3	16188	1040	CH 3	16195
464	CH 4	17343	1042	CH 4	17332
466	CH 5	16735	1044	CH 5	16715
468	CH 6	16595	1046	CH 6	16575
470	CH 7	16311	1048	CH 7	16332
472	CH 8	16416	1050	CH 8	16401
474	CH 9	15945	1052	CH 9	15914
476	CH 10	17187	1054	CH 10	17168
478	CH 11	16950	1056	CH 11	16939
480	CH 12	19718	1058	CH 12	19701
482	CH 13	17639	1060	CH 13	17634
484	CH 14	14797	1062	CH 14	14788
486	REFLECTOR 1 POSITION 15	2143	1064	COLD CAL DATA 2	16159
488	REFLECTOR 2 POSITION 15	1962	1066	CH 15	16197
490	REFL 1 POS 15 2ND LOOK	2146	1068	CH 16	17331
492	REFL 2 POS 15 2ND LOOK	1963	1070	CH 17	16718

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	3	1072		16132
496		4	1074		16201
498		5	1076		17340
500		6	1078		16739
502		7	1080		16609
504		8	1082		16323
506		9	1084		16425
508		10	1086		15921
510		11	1088		17188
512		12	1082	REFLECTOR 1 WARM CAL POS	16945
514		13	1182	REFLECTOR 2 WARM CAL POS	19711
516		14	1186	REFL 1 WARM CAL 2ND LOOK	17629
518		15	1188	REFL 2 WARM CAL 2ND LOOK	14800
520	REFLECTOR 1 POSITION 16	16	1190	WARM CAL DATA 1	2294
522	REFLECTOR 2 POSITION 16	16	1192		2111
524	REFL 1 POS 16 2ND LOOK	16	1194		2298
526	REFL 2 POS 16 2ND LOOK	16	1196		2114
528	SCENE DATA BP 16	16	1198		16168
530		3	1200		16218
532		4	1202		17347
534		5	1204		16737
536		6	1206		16599
538		7	1208		16333
540		8	1210		16418
542		9	1212		15920
544		10	1214		17193
546		11	1216		16946
548		12	1218		19704
550		13	1220		17663
552		14	1222		14796
554	REFLECTOR 1 POSITION 17	17	1224		2443
556	REFLECTOR 2 POSITION 17	17	1226		2260
558	REFL 1 POS 17 2ND LOOK	17	1228		2449
560	REFL 2 POS 17 2ND LOOK	17	1230		2265
562	SCENE DATA BP 17	17	1232		16123
564		3	1234		16192
566		4	1236		17348
568		5	1238		16742
570		6	1240		16590
		7			

LEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
090	SCAN MOTOR A1-1	17827	23.24	
092	SCAN MOTOR A1-2	18679	23.68	
094	FEEDHORN A1-1	19226	25.34	
096	FEEDHORN A1-2	19971	26.78	
098	RF MUX A1-1	20582	27.47	
100	RF MUX A1-2	21443	29.13	
102	LOCAL OSCILLATOR CHANNEL 3	22465	31.03	
104	LOCAL OSCILLATOR CHANNEL 4	22476	30.73	
106	LOCAL OSCILLATOR CHANNEL 5	22094	30.52	
108	LOCAL OSCILLATOR CHANNEL 6	20379	27.44	
110	LOCAL OSCILLATOR CHANNEL 7	21047	28.50	
112	LOCAL OSCILLATOR CHANNEL 8	21535	30.36	
114	LOCAL OSCILLATOR CHANNEL 15	22118	30.00	
116	PLL LO #2 CHANNELS 9 THROUGH 14	20705	27.73	
118	PLL LO #1 CHANNELS 9 THROUGH 14	23109	32.33	
120	SPARE (NOT USED)	32767	51.27	
122	MIXER/IF AMPLIFIER CHANNEL 3	22121	29.55	
124	MIXER/IF AMPLIFIER CHANNEL 4	22128	29.77	
126	MIXER/IF AMPLIFIER CHANNEL 5	21761	29.45	
128	MIXER/IF AMPLIFIER CHANNEL 6	20781	27.93	
130	MIXER/IF AMPLIFIER CHANNEL 7	20856	28.31	
132	MIXER/IF AMPLIFIER CHANNEL 8	21951	29.75	
134	MIXER/IF AMPLIFIER CH 9 THRU 14	20741	27.35	
136	MIXER/IF AMPLIFIER CHANNEL 15	21588	29.94	
138	IF AMPLIFIER CHANNEL 11 THRU 14	21550	29.45	
140	IF AMPLIFIER CHANNEL 9	21573	29.56	
142	IF AMPLIFIER CHANNEL 10	21735	29.56	
144	IF AMPLIFIER CHANNEL 11	20511	27.52	
146	DC/DC CONVERTER	22145	30.51	
148	IF AMPLIFIER CHANNEL 13	20528	27.53	
150	IF AMPLIFIER CHANNEL 14	20632	27.82	
152	IF AMPLIFIER CHANNEL 12	20425	27.44	
154	RF SHELF A1-1	20545	28.53	
156	RF SHELF A1-2	21267	29.07	
158	DETECTOR/PREAMPLIFIER ASSEMBLY	19384	25.68	
160	A1-1 WARM LOAD 1	23424	23.18	
162	A1-1 WARM LOAD 2	23173	23.11	
164	A1-1 WARM LOAD 3	23403	23.19	
166	A1-1 WARM LOAD 4	23341	23.15	
168	A1-1 WARM LOAD CENTER	23425	23.28	
170	A1-2 WARM LOAD 1	23774	24.28	
172	A1-2 WARM LOAD 2	23923	24.21	
174	A1-2 WARM LOAD 3	24086	24.34	
176	A1-2 WARM LOAD 4	23860	24.35	
178	A1-2 WARM LOAD CENTER	23753	24.25	
180	TEMP SENSOR REFERENCE VOLTAGE	25323		

DESCRIPTION

STATUS

STATUS

STATUS

CANNER A1-1 POWER	ON		ON	
CANNER A1-2 POWER	ON		ON	
LL POWER	PLLO # 1	PLLO # 1	PLLO # 1	PLLO # 1
NTENNA IN WARM CAL POSITION MODE	NO	NO	NO	NO
NTENNA IN COLD CAL POSITION MODE	NO	NO	NO	NO
NTENNA IN NADIR POSITION MODE	NO	NO	NO	NO
NTENNA IN FULL SCAN MODE	YES	YES	YES	YES
URVIVAL HEATER POWER	OFF	OFF	OFF	OFF
MODULE POWER	CONNECT	CONNECT	CONNECT	CONNECT
OLD CAL POSITION MSB	ZERO	ZERO	ZERO	ZERO
OLD CAL POSITION LSB	ZERO	ZERO	ZERO	ZERO

ANALOG DATA

DESCRIPTION

VALUE

DEG C

VALUE

DEG C

VALUE

DEG C

1-1 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0	214	18.0
1-2 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4	215	19.4
1-1 RF SHELF TEMPERATURE	216	20.7	216	20.7	216	20.7
1-2 RF SHELF TEMPERATURE	218	23.4	218	23.4	218	23.4
1-1 WARM LOAD TEMPERATURE	214	18.0	214	18.0	214	18.0
1-2 WARM LOAD TEMPERATURE	215	19.4	215	19.4	215	19.4

DESCRIPTION

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	88	41.01	88	41.01	88	41.01
1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	85	39.61	85	39.61	85	39.61
IGNAL PROCESSING +15 VDC	170	14.67	170	14.67	170	14.67
NTENNA DRIVE +15 VDC	169	14.58	169	14.58	169	14.58
IGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15	148	-15.15
NTENNA DRIVE -15 VDC	146	-15.25	146	-15.25	146	-15.25
ECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85	157	7.85
IGNAL PROCESSOR +5 VDC	145	4.83	145	4.83	145	4.83
NTENNA DRIVE +5 VDC	144	4.80	144	4.80	144	4.80
ECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76	169	9.76
HASE LOCK LOOP (CHANNEL 9/14)	169	14.58	169	14.58	169	14.58
HASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30	145	-15.30
HASE LOCK LOOP (CHANNEL 8)	171	9.78	171	9.78	171	9.78
.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78	171	9.78
.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84	172	9.84
.O. VOLTAGE (CHANNEL 3)	171	9.78	171	9.78	171	9.78
.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84	172	9.84
.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78	171	9.78
LLO # 2 LOCK DETECT	1	0.02	1	0.02	1	0.02
LLO # 1 LOCK DETECT	219	4.38	220	4.40	220	4.40
.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER
VARIABLE TARGET FLOW METER
BASEPLATE HEATER N2
BASEPLATE N2
BASEPLATE FLOW METER
ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

AMSU A1-33 A1 EXE FULL SCAN MODE P1 20-NOV-99 10:00:18 SCAN NUMBER 675
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

COMMANDS
[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLLO # 1 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]

POWER [4] ON
SELECT TOUCHSCREEN BUTTON 3 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

PRE-HIGH FREQ. 2.86 Hz PLB

3.2.4. 2.2.9.3

NO: 748613 OP: 0810 1ST CPT
PN: 1331720-3-IT SN: 109

TDS 51

(135)
T

TEST ENG: DA 11/20/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	11111111	572	SCENE DATA	16363
2	SYNC SEQUENCE	11111111	574	BP	16455
3	SYNC SEQUENCE	11111111	576		15988
4	UNIT ID AND SERIAL NO	00100001	578		17234
5	DIGITAL B DATA	00000010	580		17010
6	DIGITAL B DATA	00001110	582		19792
7	DIGITAL B DATA	00000000	584		17692
8	DIGITAL B DATA	00000000	586		14858
10	REFLECTOR 1 POSITION	16225	588	REFLECTOR 1 POSITION	2597
12	REFLECTOR 2 POSITION	16225	590	REFLECTOR 2 POSITION	2415
14	REFL 1 POS	16225	592	REFL 1 POS	2602
16	REFL 2 POS	16169	594	REFL 2 POS	2419
18	SCENE DATA	16245	596	SCENE DATA	16172
20		17374	598		16245
22		16751	600		17383
24		16600	602		16773
26		16363	604		16623
28		16438	606		16368
30		15956	608		16451
32		17219	610		15963
34		16989	612		17223
36		19778	614		16998
38		17693	616		19792
40		14850	618		17697
42		168	620		14862
44	REFLECTOR 1 POSITION	16371	622	REFLECTOR 1 POSITION	2747
46	REFLECTOR 2 POSITION	174	624	REFLECTOR 2 POSITION	2568
48	REFL 1 POS	16375	626	REFL 1 POS	2753
50	REFL 2 POS	16185	628	REFL 2 POS	2570
52	SCENE DATA	16239	630	SCENE DATA	16155
54		17364	632		16227
56		16755	634		17353
58		16602	636		16603
60		16348	638		16342
62		16436	640		16439
64		15957	642		15958
66		17220	644		17217
68		16997	646		16997
70		19790	648		19779
72		17689	650		17700
74		14850	652		14851
76		323	654		2898
78	REFLECTOR 1 POSITION	1436	656	REFLECTOR 1 POSITION	2718
80	REFLECTOR 2 POSITION	326	658	REFLECTOR 2 POSITION	2905
82	REFL 1 POS	148	660	REFL 1 POS	2722
84	REFL 2 POS	16153	662	REFL 2 POS	16157
86	SCENE DATA	16227	664	SCENE DATA	16229
88		17363	666		17358
90		16757	668		16752
92			670		

AMSU A1_33 A1.EXE			DIGITAL A DATA			20-NOV-99			10:00:21			PAGE			2		
FULL SCAN MODE																	
ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH	7	16603	672	REFLECTOR 1 POSITION	21	CH	7	16600								
96	CH	8	16338	674	REFLECTOR 2 POSITION	21	CH	8	16345								
98	CH	9	16439	676	REFL 1 POS	21	CH	9	16443								
100	CH	10	15966	678	REFL 2 POS	21	CH	10	15954								
102	CH	11	17229	680	SCENE DATA	BP	CH	11	17223								
104	CH	12	16994	682			CH	12	16995								
106	CH	13	19781	684			CH	13	19772								
108	CH	14	17694	686			CH	14	17704								
110	CH	15	14852	688			CH	15	14849								
112	REFLECTOR 1 POSITION	4	475	690	REFLECTOR 1 POSITION	21			30522								
114	REFLECTOR 2 POSITION	4	297	692	REFLECTOR 2 POSITION	21			2868								
116	REFL 1 POS	4	478	694	REFL 1 POS	21			3057								
118	REFL 2 POS	4	300	696	REFL 2 POS	21			2874								
120	SCENE DATA	BP	4	698	SCENE DATA	BP	21	CH	3	16158							
122				700				CH	4	16231							
124				702				CH	5	17359							
126				704				CH	6	16753							
128				706				CH	7	16600							
130				708				CH	8	16342							
132				710				CH	9	16441							
134				712				CH	10	15956							
136				714				CH	11	17220							
138				716				CH	12	16993							
140				718				CH	13	19789							
142				720				CH	14	17688							
144				722				CH	15	14848							
146	REFLECTOR 1 POSITION	5	626	724	REFLECTOR 1 POSITION	22			3201								
148	REFLECTOR 2 POSITION	5	443	726	REFLECTOR 2 POSITION	22			3024								
150	REFL 1 POS	5	632	728	REFL 1 POS	22			3206								
152	REFL 2 POS	5	448	730	REFL 2 POS	22			3028								
154	SCENE DATA	BP	5	732	SCENE DATA	BP	22	CH	3	16157							
156				734				CH	4	16228							
158				736				CH	5	17358							
160				738				CH	6	16754							
162				740				CH	7	16600							
164				742				CH	8	16346							
166				744				CH	9	16436							
168				746				CH	10	15954							
170				748				CH	11	17211							
172				750				CH	12	16998							
174				752				CH	13	19765							
176				754				CH	14	17691							
178				756				CH	15	14849							
180	REFLECTOR 1 POSITION	6	777	758	REFLECTOR 1 POSITION	23			3350								
182	REFLECTOR 2 POSITION	6	595	760	REFLECTOR 2 POSITION	23			3172								
184	REFL 1 POS	6	781	762	REFL 1 POS	23			3356								
186	REFL 2 POS	6	598	764	REFL 2 POS	23			3178								
188	SCENE DATA	BP	6	766	SCENE DATA	BP	23	CH	3	16160							
190				768				CH	4	16232							
192				770				CH	5	17361							

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16766	772	CH 6	16750
196	CH 7	16616	774	CH 7	16601
198	CH 8	16343	776	CH 8	16339
200	CH 9	16452	778	CH 9	16443
202	CH 10	15960	780	CH 10	15958
204	CH 11	17229	782	CH 11	17216
206	CH 12	17003	784	CH 12	16993
208	CH 13	19812	786	CH 13	19788
210	CH 14	17712	788	CH 14	17682
212	CH 15	14860	790	CH 15	14850
214	REFLECTOR 1 POSITION 7	929	792	REFLECTOR 1 POSITION 24	3504
216	REFLECTOR 2 POSITION 7	749	794	REFLECTOR 2 POSITION 24	3324
218	REFL 1 POS 7	933	796	REFL 1 POS 24	3508
220	REFL 2 POS 7	748	798	REFL 2 POS 24	3330
222	SCENE DATA BP 7	16157	800	SCENE DATA BP 24	16150
224	CH 3	16227	802	CH 3	16232
226	CH 4	17352	804	CH 4	17362
228	CH 5	16755	806	CH 5	16752
230	CH 6	16599	808	CH 6	16598
232	CH 7	16343	810	CH 7	16337
234	CH 8	16440	812	CH 8	16440
236	CH 9	15956	814	CH 9	15959
238	CH 10	17225	816	CH 10	17217
240	CH 11	16996	818	CH 11	16996
242	CH 12	19775	820	CH 12	19785
244	CH 13	17684	822	CH 13	17684
246	CH 14	14851	824	CH 14	14849
248	CH 15	1080	826	CH 15	3653
250	REFLECTOR 1 POSITION 8	900	828	REFLECTOR 1 POSITION 25	3476
252	REFLECTOR 2 POSITION 8	1085	830	REFLECTOR 2 POSITION 25	3659
254	REFL 1 POS 8	903	832	REFL 1 POS 25	3480
256	REFL 2 POS 8	16153	834	REFL 2 POS 25	16153
258	SCENE DATA BP 8	16232	836	SCENE DATA BP 25	16232
260	CH 3	17359	838	CH 3	17358
262	CH 4	16755	840	CH 4	16751
264	CH 5	16603	842	CH 5	16601
266	CH 6	16340	844	CH 6	16342
268	CH 7	16442	846	CH 7	16437
270	CH 8	15962	848	CH 8	15960
272	CH 9	17216	850	CH 9	17218
274	CH 10	17006	852	CH 10	16997
276	CH 11	19777	854	CH 11	19770
278	CH 12	17712	856	CH 12	17711
280	CH 13	14851	858	CH 13	14848
282	CH 14	12333	860	CH 14	3806
284	CH 15	1052	862	CH 15	3627
286	REFLECTOR 1 POSITION 9	1236	864	REFLECTOR 1 POSITION 26	3812
288	REFLECTOR 2 POSITION 9	1054	866	REFLECTOR 2 POSITION 26	3632
290	REFL 1 POS 9	16157	870	REFL 1 POS 26	16179
292	REFL 2 POS 9	16235		REFL 2 POS 26	16239
	SCENE DATA BP 9			SCENE DATA BP 26	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17364	872	CH 5	17361
296	CH 6	16751	874	CH 6	16752
298	CH 7	16603	876	CH 7	16598
300	CH 8	16345	878	CH 8	16343
302	CH 9	16437	880	CH 9	16442
304	CH 10	15956	882	CH 10	15960
306	CH 11	17217	884	CH 11	17214
308	CH 12	16990	886	CH 12	16996
310	CH 13	19788	888	CH 13	19784
312	CH 14	17707	890	CH 14	17690
314	CH 15	14850	892	CH 15	14850
316	REFLECTOR 1 POSITION 10	1385	894	REFLECTOR 1 POSITION 27	3969
318	REFLECTOR 2 POSITION 10	1203	896	REFLECTOR 2 POSITION 27	3782
320	REFL 1 POS 10 2ND LOOK	1389	898	REFL 1 POS 27 2ND LOOK	3972
322	REFL 2 POS 10 2ND LOOK	1205	900	REFL 2 POS 27 2ND LOOK	3785
324	SCENE DATA BP 10	16165	902	SCENE DATA BP 27	16156
326	CH 3	16229	904	CH 3	16236
328	CH 4	17362	906	CH 4	17365
330	CH 5	16752	908	CH 5	16750
332	CH 6	16603	910	CH 6	16603
334	CH 7	16341	912	CH 7	16344
336	CH 8	16438	914	CH 8	16438
338	CH 9	15957	916	CH 9	15957
340	CH 10	17219	918	CH 10	17213
342	CH 11	16990	920	CH 11	16994
344	CH 12	19779	922	CH 12	19770
346	CH 13	17690	924	CH 13	17685
348	CH 14	14850	926	CH 14	14849
350	CH 15	1535	928	CH 15	4111
352	REFLECTOR 1 POSITION 11	1356	930	REFLECTOR 1 POSITION 28	3937
354	REFLECTOR 2 POSITION 11	1538	932	REFLECTOR 2 POSITION 28	4115
356	REFL 1 POS 11 2ND LOOK	1357	934	REFL 1 POS 28 2ND LOOK	3936
358	REFL 2 POS 11 2ND LOOK	16143	936	REFL 2 POS 28 2ND LOOK	16139
360	SCENE DATA BP 11	16230	938	SCENE DATA BP 28	16240
362	CH 3	17364	940	CH 3	17364
364	CH 4	16753	942	CH 4	16749
366	CH 5	16602	944	CH 5	16600
368	CH 6	16346	946	CH 6	16343
370	CH 7	16437	948	CH 7	16438
372	CH 8	15962	950	CH 8	15959
374	CH 9	17221	952	CH 9	17213
376	CH 10	16994	954	CH 10	16992
378	CH 11	19757	956	CH 11	19787
380	CH 12	17691	958	CH 12	17683
382	CH 13	14850	960	CH 13	14849
384	CH 14	1686	962	CH 14	4259
386	CH 15	1506	964	CH 15	4083
388	REFLECTOR 1 POSITION 12	1692	966	REFLECTOR 1 POSITION 29	4267
390	REFL 1 POS 12 2ND LOOK	1509	968	REFL 1 POS 29 2ND LOOK	4087
392	REFL 2 POS 12 2ND LOOK	16173	970	REFL 2 POS 29 2ND LOOK	16118
	SCENE DATA BP 12			SCENE DATA BP 29	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH	162335	972	CH	16264
396	CH	17360	974	CH	17397
398	CH	16752	976	CH	16752
400	CH	16601	978	CH	16600
402	CH	16342	980	CH	16390
404	CH	16439	982	CH	16439
406	CH	15958	984	CH	15954
408	CH	17222	986	CH	17213
410	CH	16992	988	CH	16999
412	CH	19779	990	CH	19779
414	CH	17693	992	CH	17710
416	CH	14851	994	CH	14849
418	REFLECTOR 1 POSITION 13	1840	996	REFLECTOR 1 POSITION 30	4420
420	REFLECTOR 2 POSITION 13	1659	998	REFLECTOR 2 POSITION 30	4235
422	REFL 1 POS 13	1843	1000	REFL 1 POS 30	4422
424	REFL 2 POS 13	1660	1002	REFL 2 POS 30	4240
426	SCENE DATA BP 13	16149	1004	SCENE DATA BP 30	16186
428	CH	16242	1006	CH	16250
430	CH	17373	1008	CH	17365
432	CH	16769	1010	CH	16748
434	CH	16617	1012	CH	16602
436	CH	16354	1014	CH	16351
438	CH	16455	1016	CH	16438
440	CH	15962	1018	CH	15957
442	CH	17238	1020	CH	17220
444	CH	17020	1022	CH	17005
446	CH	19804	1024	CH	19799
448	CH	17717	1026	CH	17699
450	CH	14859	1028	CH	14849
452	REFLECTOR 1 POSITION 14	1989	1030	REFLECTOR 1 COLD CAL POS	6016
454	REFLECTOR 2 POSITION 14	1807	1032	REFLECTOR 2 COLD CAL POS	5833
456	REFL 1 POS 14	1995	1034	REFL 1 COLD CAL 2ND LOOK	6016
458	REFL 2 POS 14	1812	1036	REFL 2 COLD CAL 2ND LOOK	5833
460	SCENE DATA BP 14	16144	1038	COLD CAL DATA 1	16201
462	CH	162335	1040	CH	16239
464	CH	17376	1042	CH	17367
466	CH	16764	1044	CH	16754
468	CH	16617	1046	CH	16601
470	CH	16342	1048	CH	16356
472	CH	16456	1050	CH	16438
474	CH	15984	1052	CH	15957
476	CH	17229	1054	CH	17207
478	CH	17011	1056	CH	16990
480	CH	19794	1058	CH	19782
482	CH	17701	1060	CH	17702
484	CH	14858	1062	CH	14848
486	REFLECTOR 1 POSITION 15	2144	1064	COLD CAL DATA 2	16203
488	REFLECTOR 2 POSITION 15	1963	1066	CH	16239
490	REFL 1 POS 15	2146	1068	CH	17364
492	REFL 2 POS 15	1964	1070	CH	16752

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	16173	1072		16603
496		16249	1074		16362
498		17377	1076		16435
500		16770	1078		15957
502		16632	1080		17220
504		16351	1082		17003
506		16457	1084		19771
508		15967	1086		17686
510		17228	1088		14850
512		17004	1182	REFLECTOR 1 WARM CAL POS	10416
514		19793	1184	REFLECTOR 2 WARM CAL POS	10233
516		17697	1186	REFL 1 WARM CAL 2ND LOOK	10416
518		14860	1188	REFL 2 WARM CAL 2ND LOOK	10232
520	REFLECTOR 1 POSITION 16	2293	1190	WARM CAL DATA 1	16151
522	REFLECTOR 2 POSITION 16	2112	1192		16226
524	REFL 1 POS 16 2ND LOOK	2299	1194		17354
526	REFL 2 POS 16 2ND LOOK	2115	1196		16742
528	SCENE DATA BP 16	16204	1198		16593
530		16264	1200		16338
532		17377	1202		16432
534		16768	1204		15947
536		16616	1206		17212
538		16361	1208		16981
540		16457	1210		19752
542		15957	1212		17687
544		17237	1214		14845
546		17002	1216		16153
548		19799	1218		16227
550		17695	1220		17353
552		14855	1222		16744
554	REFLECTOR 1 POSITION 17	2443	1224		16594
556	REFLECTOR 2 POSITION 17	2262	1226		16341
558	REFL 1 POS 17 2ND LOOK	2450	1228		16434
560	REFL 2 POS 17 2ND LOOK	2265	1230		15951
562	SCENE DATA BP 17	16156	1232		17206
564		16242	1234		16996
566		17378	1236		19761
568		16769	1238		17675
570		16614	1240		14845

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
1090	SCAN MOTOR A1-1	17717	23.04	
1092	SCAN MOTOR A1-2	18571	23.47	
1094	FEEDHORN A1-1	19034	24.97	
1096	FEEDHORN A1-2	19732	26.33	
1098	RF MUX A1-1	20218	26.78	
1100	RF MUX A1-2	21076	28.43	
1102	LOCAL OSCILLATOR CHANNEL 3	21972	30.08	
1104	LOCAL OSCILLATOR CHANNEL 4	21945	29.72	
1106	LOCAL OSCILLATOR CHANNEL 5	21632	29.63	
1108	LOCAL OSCILLATOR CHANNEL 6	20043	26.80	
1110	LOCAL OSCILLATOR CHANNEL 7	20691	27.82	
1112	LOCAL OSCILLATOR CHANNEL 8	21067	29.46	
1114	LOCAL OSCILLATOR CHANNEL 15	21366	28.57	
1116	PLL LO #2 CHANNELS 9 THROUGH 14	21640	29.51	
1118	PLL LO #1 CHANNELS 9 THROUGH 14	21434	29.12	
1120	SPARE (NOT USED)	32767	51.83	
1122	MIXER/IF AMPLIFIER CHANNEL 3	21745	28.03	
1124	MIXER/IF AMPLIFIER CHANNEL 4	21740	29.73	
1126	MIXER/IF AMPLIFIER CHANNEL 5	21384	27.27	
1128	MIXER/IF AMPLIFIER CHANNEL 6	20436	27.56	
1130	MIXER/IF AMPLIFIER CHANNEL 7	20459	28.99	
1132	MIXER/IF AMPLIFIER CHANNEL 8	21551	26.76	
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20427	28.85	
1136	MIXER/IF AMPLIFIER CHANNEL 15	21020	28.07	
1138	IF AMPLIFIER CHANNEL 11 THRU 14	20822	28.15	
1140	IF AMPLIFIER CHANNEL 9	20840	28.16	
1142	IF AMPLIFIER CHANNEL 10	21000	26.94	
1144	IF AMPLIFIER CHANNEL 11	20204	29.37	
1146	DC/DC CONVERTER	21539	26.95	
1148	IF AMPLIFIER CHANNEL 13	20226	27.26	
1150	IF AMPLIFIER CHANNEL 14	20333	27.87	
1152	IF AMPLIFIER CHANNEL 12	20121	26.87	
1154	RF SHELF A1-1	20054	27.59	
1156	RF SHELF A1-2	20882	28.34	
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	19155	25.25	
1160	A1-1 WARM LOAD 1	23326	22.99	
1162	A1-1 WARM LOAD 2	23080	22.93	
1164	A1-1 WARM LOAD 3	23305	23.00	
1166	A1-1 WARM LOAD 4	23243	22.96	
1168	A1-1 WARM LOAD CENTER	23327	23.09	
1170	A1-2 WARM LOAD 1	23645	24.02	
1172	A1-2 WARM LOAD 2	23797	23.96	
1174	A1-2 WARM LOAD 3	23955	24.08	
1176	A1-2 WARM LOAD 4	23734	24.11	
1178	A1-2 WARM LOAD CENTER	23626	24.00	
1180	TEMP SENSOR REFERENCE VOLTAGE	25321		

DESCRIPTION

STATUS

STATUS

STATUS

SCANNER A1-1 POWER
 SCANNER A1-2 POWER
 PLL POWER
 ANTENNA IN WARM CAL POSITION MODE
 ANTENNA IN COLD CAL POSITION MODE
 ANTENNA IN NADIR POSITION MODE
 ANTENNA IN FULL SCAN MODE
 SURVIVAL HEATER POWER
 MODULE POWER
 COLD CAL POSITION MSB
 COLD CAL POSITION LSB

ON
 ON
 ON
 PLLO # 1
 NO
 NO
 NO
 YES
 OFF
 CONNECT
 ZERO
 ZERO

ON
 ON
 ON
 PLLO # 1
 NO
 NO
 NO
 YES
 OFF
 CONNECT
 ZERO
 ZERO

ON
 ON
 ON
 PLLO # 1
 NO
 NO
 NO
 YES
 OFF
 CONNECT
 ZERO
 ZERO

ANALOG DATA
DESCRIPTION

VALUE DEG C VALUE DEG C VALUE DEG C

A1-1 SCANNER MOTOR TEMPERATURE
 A1-2 SCANNER MOTOR TEMPERATURE
 A1-1 RF SHELF TEMPERATURE
 A1-2 RF SHELF TEMPERATURE
 A1-1 WARM LOAD TEMPERATURE
 A1-2 WARM LOAD TEMPERATURE

214 18.0 214 18.0 214 18.0
 215 19.4 215 19.4 215 19.4
 216 20.7 216 20.7 216 20.7
 218 23.4 218 23.4 218 23.4
 214 18.0 214 18.0 214 18.0
 215 19.4 215 19.4 215 19.4

DESCRIPTION

VALUE AMPS/VOLTS
 VALUE AMPS/VOLTS
 VALUE AMPS/VOLTS

A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)
 A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)
 SIGNAL PROCESSING +15 VDC
 ANTENNA DRIVE +15 VDC
 SIGNAL PROCESSING -15 VDC
 ANTENNA DRIVE -15 VDC
 RECEIVER AMPLIFIER +8 VDC
 SIGNAL PROCESSOR +5 VDC
 ANTENNA DRIVE +5 VDC
 RECEIVER MIXER/IF +10 VDC
 PHASE LOCK LOOP (CHANNEL 9/14) +15 VDC
 PHASE LOCK LOOP (CHANNEL 9/14) -15 VDC
 L.O. VOLTAGE (CHANNEL 8)
 L.O. VOLTAGE (CHANNEL 7)
 L.O. VOLTAGE (CHANNEL 6)
 L.O. VOLTAGE (CHANNEL 3)
 L.O. VOLTAGE (CHANNEL 4)
 L.O. VOLTAGE (CHANNEL 5)
 PLL # 2 LOCK DETECT
 PLL # 1 LOCK DETECT
 L.O. VOLTAGE (CHANNEL 15)

87 40.54 87 40.54 87 40.54
 83 38.68 83 38.68 83 38.68
 170 14.67 170 14.67 170 14.67
 169 14.58 169 14.58 169 14.58
 148 -15.15 148 -15.15 148 -15.15
 146 -15.25 146 -15.25 146 -15.25
 156 7.80 156 7.80 156 7.80
 145 4.83 145 4.83 145 4.83
 144 4.80 144 4.80 144 4.80
 169 9.76 169 9.76 169 9.76
 169 14.58 169 14.58 169 14.58
 145 -15.30 145 -15.30 145 -15.30
 171 9.78 171 9.78 171 9.78
 172 9.84 172 9.84 172 9.84
 172 9.84 172 9.84 172 9.84
 172 9.84 172 9.84 172 9.84
 171 9.78 171 9.78 171 9.78
 1 0.02 1 0.02 1 0.02
 219 4.38 219 4.38 219 4.38
 170 14.67 170 14.67 170 14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
516	58.00	503	31.00
517	59.00	511	32.00
514	60.00	512	33.00
515	1.00	509	38.00
518	2.00	510	39.00
519	63.00	504	61.00
521	64.00	513	62.00
523	3.00	520	4.00
575	9.00	522	10.00
579	65.00	577	74.00
	73.00	581	76.00
	75.00		

AMSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 10:03:33 SCAN NUMBER 700
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

COMMANDS
[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLLO # 1 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]
POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 3

POST-HIGH FREQ. 2.86 Hz PLB

3.2.4.2.2.9.3

910: 748613 OP: 0810 1ST CPT
P/N: 1331720-3-IT SN: 109

TD 51

139
T

TEST ENG: (7A) 11/20/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	11111111	572	SCENE DATA	16350
2	SYNC SEQUENCE	11111111	574	BP	16442
3	SYNC SEQUENCE	11111111	576	17	15974
4	UNIT ID AND SERIAL NO	00100001	578	CH 8	17229
5	DIGITAL B DATA	00000010	580	CH 9	17008
6	DIGITAL B DATA	00001110	582	CH 10	19779
7	DIGITAL B DATA	00000000	584	CH 11	17694
8	DIGITAL B DATA	00000000	586	CH 12	14835
10	REFLECTOR 1 POSITION	24	588	CH 13	2597
12	REFLECTOR 2 POSITION	16224	590	CH 14	2416
14	REFL 1 POS	16224	592	CH 15	2601
16	REFL 2 POS	16162	594	2ND LOOK	2419
18	SCENE DATA	16227	596	18	16152
20	BP	17356	598	CH 3	16223
22	CH 4	16737	600	CH 4	17365
24	CH 5	16587	602	CH 5	16760
26	CH 6	16354	604	CH 6	16608
28	CH 7	16414	606	CH 7	16362
30	CH 8	15942	608	CH 8	16428
32	CH 9	17222	610	CH 9	15944
34	CH 10	16982	612	CH 10	17233
36	CH 11	19767	614	CH 11	16986
38	CH 12	17682	616	CH 12	19775
40	CH 13	14825	618	CH 13	17656
42	CH 14	16372	620	CH 14	14837
44	CH 15	16372	622	CH 15	2748
46	REFLECTOR 1 POSITION	174	624	19	2567
48	REFLECTOR 2 POSITION	16375	626	2ND LOOK	2752
50	REFL 1 POS	16173	628	19	2570
52	REFL 2 POS	16217	630	2ND LOOK	16140
54	SCENE DATA	16351	632	BP	16213
56	CH 3	16738	634	CH 3	17349
58	CH 4	16592	636	CH 4	16740
60	CH 5	16343	638	CH 5	16587
62	CH 6	15943	640	CH 6	16327
64	CH 7	17221	642	CH 7	16416
66	CH 8	16999	644	CH 8	15942
68	CH 9	17702	646	CH 9	17215
70	CH 10	14826	648	CH 10	16991
72	CH 11	323	650	CH 11	19758
74	CH 12	143	652	CH 12	17685
76	CH 13	326	654	CH 13	14827
78	CH 14	326	656	CH 14	2899
80	REFLECTOR 1 POSITION	143	658	CH 15	2718
82	REFLECTOR 2 POSITION	326	660	20	2905
84	REFL 1 POS	148	662	2ND LOOK	2722
86	REFL 2 POS	16140	664	2ND LOOK	16144
88	SCENE DATA	16210	666	BP	16209
90	BP	17346	668	20	17341
92	CH 3	16743	670	CH 3	16738
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16592	672	CH 7	16587
96	CH 8	16327	674	CH 8	16332
98	CH 9	16419	676	CH 9	16424
100	CH 10	15946	678	CH 10	15939
102	CH 11	17219	680	CH 11	17224
104	CH 12	16994	682	CH 12	16992
106	CH 13	19775	684	CH 13	19771
108	CH 14	17675	686	CH 14	17712
110	CH 15	14828	688	CH 15	14827
112	REFLECTOR 1 POSITION 4	476	690	REFLECTOR 1 POSITION 21	3053
114	REFLECTOR 2 POSITION 4	297	692	REFLECTOR 2 POSITION 21	2868
116	REFL 1 POS 4 2ND LOOK	478	694	REFL 1 POS 21 2ND LOOK	3056
118	REFL 2 POS 4 2ND LOOK	299	696	REFL 2 POS 21 2ND LOOK	2873
120	SCENE DATA BP 4	16137	698	SCENE DATA BP 21	16148
122	CH 3	16210	700	CH 3	16212
124	CH 4	17341	702	CH 4	17342
126	CH 5	16753	704	CH 5	16739
128	CH 6	16594	706	CH 6	16590
130	CH 7	16333	708	CH 7	16330
132	CH 8	16426	710	CH 8	16421
134	CH 9	15956	712	CH 9	15936
136	CH 10	17230	714	CH 10	17221
138	CH 11	16993	716	CH 11	16988
140	CH 12	19787	718	CH 12	19759
142	CH 13	17713	720	CH 13	17680
144	CH 14	14832	722	CH 14	14826
146	CH 15	624	724	REFLECTOR 1 POSITION 22	3202
148	REFLECTOR 2 POSITION 5	445	726	REFLECTOR 2 POSITION 22	3022
150	REFL 1 POS 5 2ND LOOK	631	728	REFL 1 POS 22 2ND LOOK	3025
152	REFL 2 POS 5 2ND LOOK	448	730	REFL 2 POS 22 2ND LOOK	3027
154	SCENE DATA BP 5	16133	732	SCENE DATA BP 22	16138
156	CH 3	16208	734	CH 3	16209
158	CH 4	17342	736	CH 4	17344
160	CH 5	16751	738	CH 5	16743
162	CH 6	16599	740	CH 6	16591
164	CH 7	16332	742	CH 7	16336
166	CH 8	16430	744	CH 8	16422
168	CH 9	15957	746	CH 9	15945
170	CH 10	17217	748	CH 10	17216
172	CH 11	16990	750	CH 11	17216
174	CH 12	19780	752	CH 12	19770
176	CH 13	17710	754	CH 13	17692
178	CH 14	14833	756	CH 14	14827
180	CH 15	779	758	REFLECTOR 1 POSITION 23	3351
182	REFLECTOR 2 POSITION 6	595	760	REFLECTOR 2 POSITION 23	3172
184	REFL 1 POS 6 2ND LOOK	782	762	REFL 1 POS 23 2ND LOOK	3358
186	REFL 2 POS 6 2ND LOOK	598	764	REFL 2 POS 23 2ND LOOK	3178
188	SCENE DATA BP 6	16148	766	SCENE DATA BP 23	16145
190	CH 3	16211	768	CH 3	16210
192	CH 4	17338	770	CH 4	17344
	CH 5			CH 5	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH	16755	6	CH	16736
196	CH	16603	7	CH	16589
198	CH	16331	8	CH	16332
200	CH	16433	9	CH	16420
202	CH	15950	10	CH	15942
204	CH	17228	11	CH	17219
206	CH	16996	12	CH	16994
208	CH	19764	13	CH	19766
210	CH	17690	14	CH	17681
212	CH	14837	15	CH	14829
214	REFLECTOR 1 POSITION	930	24	REFLECTOR 1 POSITION	3504
216	REFLECTOR 2 POSITION	747	24	REFLECTOR 2 POSITION	3326
218	REFL 1 POS	933	24	REFL 1 POS	3326
220	REFL 2 POS	748	24	REFL 2 POS	3329
222	SCENE DATA	16153	BP	SCENE DATA	16140
224	CH	16213	3	CH	16208
226	CH	17343	4	CH	17343
228	CH	16740	5	CH	16740
230	CH	16587	6	CH	16593
232	CH	16331	7	CH	16330
234	CH	16422	8	CH	16416
236	CH	15936	9	CH	15936
238	CH	17215	10	CH	17222
240	CH	16990	11	CH	16986
242	CH	19759	12	CH	19746
244	CH	17695	13	CH	17708
246	CH	14826	14	CH	14827
248	REFLECTOR 1 POSITION	1080	15	REFLECTOR 1 POSITION	3654
250	REFLECTOR 2 POSITION	900	25	REFLECTOR 2 POSITION	3475
252	REFL 1 POS	1085	25	REFL 1 POS	3660
254	REFL 2 POS	903	25	REFL 2 POS	3480
256	SCENE DATA	16134	BP	SCENE DATA	16133
258	CH	16211	3	CH	16208
260	CH	17342	4	CH	17346
262	CH	16738	5	CH	16738
264	CH	16588	6	CH	16589
266	CH	16332	7	CH	16333
268	CH	16423	8	CH	16417
270	CH	15942	9	CH	15943
272	CH	17215	10	CH	17220
274	CH	16993	11	CH	16994
276	CH	19769	12	CH	19772
278	CH	17708	13	CH	17713
280	CH	14827	14	CH	14828
282	REFLECTOR 1 POSITION	1233	26	REFLECTOR 1 POSITION	3805
284	REFLECTOR 2 POSITION	1052	26	REFLECTOR 2 POSITION	3627
286	REFL 1 POS	1236	26	REFL 1 POS	3812
288	REFL 2 POS	1054	26	REFL 2 POS	3632
290	SCENE DATA	16143	BP	SCENE DATA	16165
292	CH	16217	3	CH	16216

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17348	872	CH 5	17346
296	CH 6	16737	874	CH 6	16739
298	CH 7	16589	876	CH 7	16589
300	CH 8	16333	878	CH 8	16332
302	CH 9	16423	880	CH 9	16422
304	CH 10	15944	882	CH 10	15936
306	CH 11	17218	884	CH 11	17222
308	CH 12	16990	886	CH 12	16987
310	CH 13	19761	888	CH 13	19769
312	CH 14	17682	890	CH 14	17680
314	CH 15	14826	892	CH 15	14827
316	REFLECTOR 1 POSITION 10	1385	894	REFLECTOR 1 POSITION 27	3969
318	REFLECTOR 2 POSITION 10	1202	896	REFLECTOR 2 POSITION 27	3779
320	REFL 1 POS 10	1389	898	REFL 1 POS 27	3971
322	REFL 2 POS 10	1205	900	REFL 2 POS 27	3785
324	SCENE DATA BP 10	16154	902	SCENE DATA BP 27	16140
326	CH 3	16211	904	CH 3	16217
328	CH 4	17342	906	CH 4	17351
330	CH 5	16735	908	CH 5	16739
332	CH 6	16587	910	CH 6	16589
334	CH 7	16335	912	CH 7	16332
336	CH 8	16417	914	CH 8	16417
338	CH 9	15943	916	CH 9	15941
340	CH 10	17221	918	CH 10	17217
342	CH 11	16989	920	CH 11	16981
344	CH 12	19766	922	CH 12	19776
346	CH 13	17695	924	CH 13	17700
348	CH 14	14826	926	CH 14	14827
350	REFLECTOR 1 POSITION 11	1534	928	REFLECTOR 1 POSITION 28	4109
352	REFLECTOR 2 POSITION 11	1355	930	REFLECTOR 2 POSITION 28	3937
354	REFL 1 POS 11	1540	932	REFL 1 POS 28	4114
356	REFL 2 POS 11	1356	934	REFL 2 POS 28	3936
358	SCENE DATA BP 11	16131	936	SCENE DATA BP 28	16132
360	CH 3	16214	938	CH 3	16220
362	CH 4	17351	940	CH 4	17351
364	CH 5	16738	942	CH 5	16737
366	CH 6	16587	944	CH 6	16587
368	CH 7	16337	946	CH 7	16337
370	CH 8	16417	948	CH 8	16414
372	CH 9	15945	950	CH 9	15943
374	CH 10	17227	952	CH 10	17215
376	CH 11	16977	954	CH 11	16988
378	CH 12	19761	956	CH 12	19759
380	CH 13	17680	958	CH 13	17684
382	CH 14	14828	960	CH 14	14826
384	REFLECTOR 1 POSITION 12	1686	962	REFLECTOR 1 POSITION 29	4259
386	REFLECTOR 2 POSITION 12	1507	964	REFLECTOR 2 POSITION 29	4084
388	REFL 1 POS 12	1591	966	REFL 1 POS 29	4267
390	REFL 2 POS 12	1509	968	REFL 2 POS 29	4087
392	SCENE DATA BP 12	16159	970	SCENE DATA BP 29	16106

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16213	972	CH 4	16245
396	CH 5	17340	974	CH 5	17387
398	CH 6	16739	976	CH 6	17377
400	CH 7	16585	978	CH 7	16588
402	CH 8	16332	980	CH 8	16379
404	CH 9	16418	982	CH 9	16414
406	CH 10	15942	984	CH 10	15938
408	CH 11	17222	986	CH 11	17218
410	CH 12	16986	988	CH 12	16996
412	CH 13	19775	990	CH 13	19772
414	CH 14	17688	992	CH 14	17696
416	CH 15	14826	994	CH 15	14826
418	REFLECTOR 1 POSITION 13	1839	996	REFLECTOR 1 POSITION 30	4419
420	REFLECTOR 2 POSITION 13	1658	998	REFLECTOR 2 POSITION 30	4237
422	REFL 1 POS 13 2ND LOOK	1843	1000	REFL 1 POS 30 2ND LOOK	4422
424	REFL 2 POS 13 2ND LOOK	1660	1002	REFL 2 POS 30 2ND LOOK	4239
426	SCENE DATA BP 13	16134	1004	SCENE DATA BP 30	16173
428	CH 3	16221	1006	CH 3	16227
430	CH 4	17355	1008	CH 4	17351
432	CH 5	16757	1010	CH 5	16738
434	CH 6	16604	1012	CH 6	16588
436	CH 7	16344	1014	CH 7	16343
438	CH 8	16435	1016	CH 8	16417
440	CH 9	15945	1018	CH 9	15942
442	CH 10	17242	1020	CH 10	17227
444	CH 11	17004	1022	CH 11	16986
446	CH 12	19771	1024	CH 12	19770
448	CH 13	17710	1026	CH 13	17695
450	CH 14	14837	1028	CH 14	14827
452	CH 15	1990	1030	CH 15	6017
454	REFLECTOR 1 POSITION 14	1809	1032	REFLECTOR 1 COLD CAL POS	5834
456	REFLECTOR 2 POSITION 14	1894	1034	REFLECTOR 2 COLD CAL POS	6017
458	REFL 1 POS 14 2ND LOOK	1994	1036	REFL 1 COLD CAL 2ND LOOK	5833
460	REFL 2 POS 14 2ND LOOK	1812	1038	REFL 2 COLD CAL 2ND LOOK	16188
462	SCENE DATA BP 14	16131	1040	COLD CAL DATA 1	16221
464	CH 3	16217	1042	CH 3	16221
466	CH 4	17361	1044	CH 4	16738
468	CH 5	16751	1046	CH 5	16591
470	CH 6	16604	1048	CH 6	16350
472	CH 7	16333	1050	CH 7	16419
474	CH 8	16429	1052	CH 8	15943
476	CH 9	15968	1054	CH 9	17222
478	CH 10	17237	1056	CH 10	16989
480	CH 11	16999	1058	CH 11	19756
482	CH 12	19764	1060	CH 12	17694
484	CH 13	17692	1062	CH 13	14826
486	CH 14	14836	1064	CH 14	16184
488	REFLECTOR 1 POSITION 15	2143	1066	REFLECTOR 2 POSITION 15	16223
490	REFLECTOR 2 POSITION 15	1963	1068	REFL 1 POS 15 2ND LOOK	17352
492	REFL 1 POS 15 2ND LOOK	2147	1070	REFL 2 POS 15 2ND LOOK	16738
		1964			

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	CH 3	1072	REFLECTOR 1 WARM CAL POS	16159
496		CH 4	1074	REFLECTOR 2 WARM CAL POS	16230
498		CH 5	1076	REFL 1 WARM CAL 2ND LOOK	17354
500		CH 6	1078	REFL 2 WARM CAL 2ND LOOK	16754
502		CH 7	1080	WARM CAL DATA 1	16614
504		CH 8	1082		16343
506		CH 9	1084		16438
508		CH 10	1086		15953
510		CH 11	1088		17236
512		CH 12	1182		17236
514		CH 13	1184		16996
516		CH 14	1186		19767
518		CH 15	1188		17698
520	REFLECTOR 1 POSITION 16	CH 16	1190		14837
522	REFLECTOR 2 POSITION 16	CH 17	1192		2294
524	REFL 1 POS 16	CH 18	1194		2112
526	REFL 2 POS 16	CH 19	1196		2299
528	SCENE DATA BP 16	CH 20	1198		16199
530		CH 21	1200		16244
532		CH 22	1202		17363
534		CH 23	1204		16751
536		CH 24	1206		16606
538		CH 25	1208		16351
540		CH 26	1210		16436
542		CH 27	1212		15946
544		CH 28	1214		17237
546		CH 29	1216		16991
548		CH 30	1218		19778
550		CH 31	1220		17706
552		CH 32	1222		14831
554	REFLECTOR 1 POSITION 17	CH 33	1224		2443
556	REFLECTOR 2 POSITION 17	CH 34	1226		2261
558	REFL 1 POS 17	CH 35	1228		2450
560	REFL 2 POS 17	CH 36	1230		2265
562	SCENE DATA BP 17	CH 37	1232		16147
564		CH 38	1234		16222
566		CH 39	1236		17364
568		CH 40	1238		16754
570		CH 41	1240		16601

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
1090	SCAN MOTOR A1-1	17748	23.10	
1092	SCAN MOTOR A1-2	18593	23.52	
1094	FEEDHORN A1-1	19065	25.03	
1096	FEEDHORN A1-2	19775	26.41	
1098	RF MUX A1-1	20309	26.95	
1100	RF MUX A1-2	21167	28.60	
1102	LOCAL OSCILLATOR CHANNEL 3	22163	30.45	
1104	LOCAL OSCILLATOR CHANNEL 4	22156	30.12	
1106	LOCAL OSCILLATOR CHANNEL 5	21808	29.97	
1108	LOCAL OSCILLATOR CHANNEL 6	20177	27.06	
1110	LOCAL OSCILLATOR CHANNEL 7	20816	28.06	
1112	LOCAL OSCILLATOR CHANNEL 8	21242	29.80	
1114	LOCAL OSCILLATOR CHANNEL 15	21633	29.08	
1116	PLL LO #2 CHANNELS 9 THROUGH 14	21318	28.90	
1118	PLL LO #1 CHANNELS 9 THROUGH 14	22126	30.44	
1120	SPARE (NOT USED)	32767	51.27	
1122	MIXER/IF AMPLIFIER CHANNEL 3	21841	29.02	
1124	MIXER/IF AMPLIFIER CHANNEL 4	21845	29.23	
1126	MIXER/IF AMPLIFIER CHANNEL 5	21486	28.92	
1128	MIXER/IF AMPLIFIER CHANNEL 6	20532	27.46	
1130	MIXER/IF AMPLIFIER CHANNEL 7	20562	27.75	
1132	MIXER/IF AMPLIFIER CHANNEL 8	21665	27.21	
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20489	26.88	
1136	MIXER/IF AMPLIFIER CHANNEL 15	21220	29.23	
1138	IF AMPLIFIER CHANNEL 11 THRU 14	21044	28.49	
1140	IF AMPLIFIER CHANNEL 9	21060	28.57	
1142	IF AMPLIFIER CHANNEL 10	21219	28.57	
1144	IF AMPLIFIER CHANNEL 11	20290	27.10	
1146	DC/DC CONVERTER	21803	27.87	
1148	IF AMPLIFIER CHANNEL 13	20308	27.11	
1150	IF AMPLIFIER CHANNEL 14	20413	27.41	
1152	IF AMPLIFIER CHANNEL 12	20203	27.02	
1154	RF SHELF A1-1	20223	27.91	
1156	RF SHELF A1-2	20991	28.55	
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	19202	25.34	
1160	A1-1 WARM LOAD 1	23341	23.02	
1162	A1-1 WARM LOAD 2	23090	22.95	
1164	A1-1 WARM LOAD 3	23322	22.03	
1166	A1-1 WARM LOAD 4	23258	22.99	
1168	A1-1 WARM LOAD CENTER	23345	23.13	
1170	A1-2 WARM LOAD 1	23661	24.06	
1172	A1-2 WARM LOAD 2	23819	24.00	
1174	A1-2 WARM LOAD 3	23976	24.12	
1176	A1-2 WARM LOAD 4	23753	24.14	
1178	A1-2 WARM LOAD CENTER	23642	24.10	
1180	TEMP SENSOR REFERENCE VOLTAGE	25322		

DESCRIPTION

STATUS

STATUS

STATUS

DESCRIPTION	STATUS	STATUS	STATUS
SCANNER A1-1 POWER	ON	ON	ON
SCANNER A1-2 POWER	ON	ON	ON
PLL POWER	PLLO # 1	PLLO # 1	PLLO # 1
ANTENNA IN WARM CAL POSITION MODE	NO	NO	NO
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO
ANTENNA IN NADIR POSITION MODE	NO	NO	NO
ANTENNA IN FULL SCAN MODE	YES	YES	YES
SURVIVAL HEATER POWER	OFF	OFF	OFF
MODULE POWER	CONNECT	CONNECT	CONNECT
COLD CAL POSITION MSB	ZERO	ZERO	ZERO
COLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA

DESCRIPTION

VALUE

DEG C

VALUE

DEG C

VALUE

DEG C

DESCRIPTION	VALUE	DEG C	VALUE	DEG C
A1-1 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0
A1-2 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4
A1-1 RF SHELF TEMPERATURE	216	20.7	216	20.7
A1-2 RF SHELF TEMPERATURE	218	23.4	218	23.4
A1-1 WARM LOAD TEMPERATURE	214	18.0	214	18.0
A1-2 WARM LOAD TEMPERATURE	215	19.4	215	19.4

DESCRIPTION

VALUE

AMPS/VOLTS

VALUE

AMPS/VOLTS

VALUE

AMPS/VOLTS

DESCRIPTION	VALUE	AMPS/VOLTS	VALUE	AMPS/VOLTS
A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	87	40.54	87	40.54
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	84	39.14	84	39.14
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	169	14.58	170	14.67
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	146	-15.25	147	-15.20
RECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	144	4.80	145	4.83
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76
PHASE LOCK LOOP (CHANNEL 9/14)	169	14.58	169	14.58
PHASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30
L.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 3)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78
PLLO # 2 LOCK DETECT	1	0.02	1	0.02
PLLO # 1 LOCK DETECT	220	4.40	220	4.40
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67

AMSU A1_33 A1.EXE

AZONIX DATA 20-NOV-99

10:03:38 PAGE 9

FULL SCAN MODE

PRT TEMPERATURES

VARIABLE TARGET

A1-1 DEG K
NO: 615 42.00
616 43.00
617 44.00
618 45.00
619 46.00
620 47.00
621 48.00
622 49.00
623 50.00
624 51.00
625 52.00
626 53.00
627 67.00
628 68.00
629 71.00
631 26.00

A1-2 DEG K
NO: 601 14.00
602 15.00
603 16.00
604 17.00
605 18.00
606 19.00
607 20.00
608 21.00
609 22.00
610 23.00
611 24.00
612 25.00
613 69.00
614 70.00
630 72.00
632 27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1 DEG K
NO: 558 5.00
559 6.00
550 7.00
551 8.00
506 57.00
507 58.00
516 59.00
517 60.00
514 1.00
515 2.00
508 63.00
518 64.00
519 3.00
521 9.00
523 65.00
575 73.00
579 75.00

A1-2 DEG K
NO: 537 34.00
538 35.00
524 36.00
525 37.00
502 30.00
503 31.00
511 32.00
512 33.00
509 38.00
510 39.00
504 61.00
513 62.00
520 4.00
522 10.00
577 74.00
581 76.00

36: 748613 OA: 0810 1ST CPT

P/N: 1331720-3-ET SN: 109

139
T

TEST ENG:

DATE: 11/20/99

AMSU A1-33 A1.EXE FULL SCAN MODE P2 20-NOV-99 09:46:19 SCAN NUMBER 589
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

COMMANDS
[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLLO # 2 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 3

PRE-HIGH FREQ. 6.67Hz PLB

3.2.4.2.2.9.3

910: 748613 OP: 0810 1ST CPT TDS-51
P/N: 1331720-3-II SN: 102
TEST ENG: (17A) DATE: 11/20/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	11111111	572	SCENE DATA	16386
2	SYNC SEQUENCE	11111111	574	BP	16511
3	SYNC SEQUENCE	11111111	576	CH 17	16027
4	UNIT ID AND SERIAL NO	00100001	578	CH 8	17282
5	DIGITAL B DATA BYTE 1	00000010	580	CH 9	17054
6	DIGITAL B DATA BYTE 2	00000110	582	CH 10	19853
7	DIGITAL B DATA BYTE 3	00000000	584	CH 11	17760
8	DIGITAL B DATA BYTE 4	00000000	586	CH 12	14892
10	REFLECTOR 1 POSITION	23	588	CH 13	2598
12	REFLECTOR 2 POSITION	16225	590	CH 14	2417
14	REFL 1 POS	23	592	CH 15	2417
16	REFL 2 POS	16225	594	REFLECTOR 1 POSITION	2601
18	SCENE DATA	16195	596	REFLECTOR 2 POSITION	2420
20	BP	16287	598	REFL 1 POS	16186
22	CH 1	17407	600	REFL 2 POS	16287
24	CH 2	16798	602	SCENE DATA	17414
26	CH 3	16634	604	BP	16815
28	CH 4	16389	606	CH 18	16651
30	CH 5	16490	608	CH 19	16397
32	CH 6	15992	610	CH 20	16500
34	CH 7	17260	612	CH 21	15998
36	CH 8	17044	614	CH 22	17276
38	CH 9	19841	616	CH 23	17045
40	CH 10	17746	618	CH 24	19817
42	CH 11	14884	620	CH 25	17752
44	CH 12	167	622	CH 26	14893
46	CH 13	16372	624	REFLECTOR 1 POSITION	2747
48	CH 14	173	626	REFLECTOR 2 POSITION	2569
50	CH 15	16376	628	REFL 1 POS	2753
52	CH 16	16202	630	REFL 2 POS	2571
54	CH 17	16283	632	SCENE DATA	16177
56	CH 18	17399	634	BP	16272
58	CH 19	16796	636	CH 3	17395
60	CH 20	16634	638	CH 4	16797
62	CH 21	16380	640	CH 5	16633
64	CH 22	16494	642	CH 6	16370
66	CH 23	15996	644	CH 7	16494
68	CH 24	17266	646	CH 8	15997
70	CH 25	17043	648	CH 9	17263
72	CH 26	19857	650	CH 10	17044
74	CH 27	17739	652	CH 11	19845
76	CH 28	14883	654	CH 12	17760
78	CH 29	323	656	CH 13	14883
80	CH 30	143	658	CH 14	2899
82	CH 31	326	660	CH 15	2718
84	CH 32	148	662	REFLECTOR 1 POSITION	2905
86	CH 33	16176	664	REFLECTOR 2 POSITION	2722
88	CH 34	16273	666	REFL 1 POS	16181
90	CH 35	17397	668	REFL 2 POS	16273
92	CH 36	16801	670	SCENE DATA	17395
				BP	16797

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16635	672	CH 7	16636
96	CH 8	16371	674	CH 8	16373
98	CH 9	16495	676	CH 9	16493
100	CH 10	16004	678	CH 10	15993
102	CH 11	17267	680	CH 11	17264
104	CH 12	17046	682	CH 12	17042
106	CH 13	19843	684	CH 13	19833
108	CH 14	17759	686	CH 14	17736
110	CH 15	14887	688	CH 15	14883
112	REFLECTOR 1 POSITION 4	474	690	REFLECTOR 1 POSITION 21	3053
114	REFLECTOR 2 POSITION 4	297	692	REFLECTOR 2 POSITION 21	2870
116	REFL 1 POS 4	479	694	REFL 1 POS 21	3056
118	REFL 2 POS 4	300	696	REFL 2 POS 21	2874
120	SCENE DATA BP 4	16180	698	SCENE DATA BP 21	16175
122	CH 3	16274	700	CH 3	16276
124	CH 4	17389	702	CH 4	17395
126	CH 5	16811	704	CH 5	16797
128	CH 6	16639	706	CH 6	16637
130	CH 7	16370	708	CH 7	16370
132	CH 8	16496	710	CH 8	16492
134	CH 9	16009	712	CH 9	15994
136	CH 10	17280	714	CH 10	17262
138	CH 11	17054	716	CH 11	17040
140	CH 12	19823	718	CH 12	19845
142	CH 13	17765	720	CH 13	17755
144	CH 14	14888	722	CH 14	14882
146	CH 15	625	724	CH 15	3202
148	REFLECTOR 1 POSITION 5	445	726	REFLECTOR 1 POSITION 22	3023
150	REFLECTOR 2 POSITION 5	632	728	REFLECTOR 2 POSITION 22	3026
152	REFL 1 POS 5	449	730	REFL 1 POS 22	3027
154	REFL 2 POS 5	16173	732	REFL 2 POS 22	16171
156	SCENE DATA BP 5	16270	734	SCENE DATA BP 22	16276
158	CH 3	17393	736	CH 3	17396
160	CH 4	16806	738	CH 4	16797
162	CH 5	16643	740	CH 5	16633
164	CH 6	16370	742	CH 6	16370
166	CH 7	16498	744	CH 7	16491
168	CH 8	16014	746	CH 8	16000
170	CH 9	17264	748	CH 9	17261
172	CH 10	17046	750	CH 10	17039
174	CH 11	19863	752	CH 11	19846
176	CH 12	17761	754	CH 12	17746
178	CH 13	14890	756	CH 13	14882
180	CH 14	777	758	CH 14	3350
182	CH 15	595	760	CH 15	3172
184	REFLECTOR 1 POSITION 6	781	762	REFLECTOR 1 POSITION 23	3357
186	REFLECTOR 2 POSITION 6	598	764	REFLECTOR 2 POSITION 23	3178
188	REFL 1 POS 6	16178	766	REFL 1 POS 23	16176
190	REFL 2 POS 6	16273	768	REFL 2 POS 23	16272
192	SCENE DATA BP 6	17393	770	SCENE DATA BP 23	17393

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16813	772	REFLECTOR 1 POSITION 24	16797
196	CH 7	16647	774	REFLECTOR 2 POSITION 24	16632
198	CH 8	16372	776	REFL 1 POS 24	16369
200	CH 9	16506	778	REFL 2 POS 24	16498
202	CH 10	15997	780	SCENE DATA BP 24	15993
204	CH 11	17270	782	CH 3	17258
206	CH 12	17044	784	CH 4	17039
208	CH 13	19853	786	CH 5	19839
210	CH 14	17747	788	CH 6	17763
212	CH 15	14892	790	CH 7	14882
214	REFLECTOR 1 POSITION 7	929	792	CH 8	3503
216	REFLECTOR 2 POSITION 7	749	794	CH 9	3326
218	REFL 1 POS 7	933	796	CH 10	3508
220	REFL 2 POS 7	749	798	CH 11	3330
222	SCENE DATA BP 7	16180	800	CH 12	16175
224	CH 3	16274	802	CH 13	16273
226	CH 4	17391	804	CH 14	17396
228	CH 5	16798	806	CH 15	16794
230	CH 6	16635	808	CH 16	16631
232	CH 7	16372	810	CH 17	16366
234	CH 8	16494	812	CH 18	16493
236	CH 9	15995	814	CH 19	15996
238	CH 10	17263	816	CH 20	17266
240	CH 11	17042	818	CH 21	17039
242	CH 12	19842	820	CH 22	19833
244	CH 13	17760	822	CH 23	17738
246	CH 14	14883	824	CH 24	14882
248	CH 15	1079	826	REFLECTOR 1 POSITION 25	3653
250	REFLECTOR 1 POSITION 8	899	828	REFLECTOR 2 POSITION 25	3476
252	REFLECTOR 2 POSITION 8	1084	830	REFL 1 POS 25	3659
254	REFL 1 POS 8	903	832	REFL 2 POS 25	3481
256	REFL 2 POS 8	16168	834	SCENE DATA BP 25	16172
258	SCENE DATA BP 8	16274	836	CH 3	16275
260	CH 3	17391	838	CH 4	17394
262	CH 4	16801	840	CH 5	16796
264	CH 5	16635	842	CH 6	16633
266	CH 6	16372	844	CH 7	16370
268	CH 7	16495	846	CH 8	16494
270	CH 8	15998	848	CH 9	15997
272	CH 9	17265	850	CH 10	17267
274	CH 10	17039	852	CH 11	17045
276	CH 11	19856	854	CH 12	19837
278	CH 12	17752	856	CH 13	17756
280	CH 13	14885	858	CH 14	14882
282	CH 14	12332	860	CH 15	3805
284	REFLECTOR 1 POSITION 9	1052	862	REFLECTOR 2 POSITION 26	3627
286	REFLECTOR 2 POSITION 9	1236	864	REFL 1 POS 26	3811
288	REFL 1 POS 9	1055	866	REFL 2 POS 26	3632
290	REFL 2 POS 9	16177	868	SCENE DATA BP 26	16190
292	SCENE DATA BP 9	16275	870	CH 3	16278
	CH 4			CH 4	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17394	872	CH 5	17398
296	CH 6	16801	874	CH 6	16795
298	CH 7	16633	876	CH 7	16634
300	CH 8	16375	878	CH 8	16371
302	CH 9	16492	880	CH 9	16492
304	CH 10	15995	882	CH 10	15995
306	CH 11	17262	884	CH 11	17268
308	CH 12	17051	886	CH 12	17037
310	CH 13	19862	888	CH 13	19843
312	CH 14	17737	890	CH 14	17742
314	CH 15	14883	892	CH 15	14882
316	REFLECTOR 1 POSITION 10	1385	894	REFLECTOR 1 POSITION 27	3970
318	REFLECTOR 2 POSITION 10	1205	896	REFLECTOR 2 POSITION 27	3781
320	REFL 1 POS 10 2ND LOOK	1389	898	REFL 1 POS 27 2ND LOOK	3971
322	REFL 2 POS 10 2ND LOOK	1205	900	REFL 2 POS 27 2ND LOOK	3785
324	SCENE DATA BP 10	16185	902	SCENE DATA BP 27	16171
326	CH 3	16274	904	CH 3	16277
328	CH 4	17393	906	CH 4	17401
330	CH 5	16798	908	CH 5	16795
332	CH 6	16634	910	CH 6	16634
334	CH 7	16375	912	CH 7	16374
336	CH 8	16488	914	CH 8	16492
338	CH 9	15995	916	CH 9	15993
340	CH 10	17261	918	CH 10	17272
342	CH 11	17055	920	CH 11	17047
344	CH 12	19851	922	CH 12	19830
346	CH 13	17742	924	CH 13	17770
348	CH 14	14884	926	CH 14	14882
350	CH 15	1534	928	CH 15	4110
352	REFLECTOR 1 POSITION 11	1356	930	REFLECTOR 1 POSITION 28	3938
354	REFLECTOR 2 POSITION 11	1540	932	REFLECTOR 2 POSITION 28	4114
356	REFL 1 POS 11 2ND LOOK	1357	934	REFL 1 POS 28 2ND LOOK	3936
358	REFL 2 POS 11 2ND LOOK	16165	936	REFL 2 POS 28 2ND LOOK	16161
360	SCENE DATA BP 11	16275	938	SCENE DATA BP 28	16281
362	CH 3	17394	940	CH 3	17395
364	CH 4	16797	942	CH 4	16797
366	CH 5	16638	944	CH 5	16634
368	CH 6	16375	946	CH 6	16369
370	CH 7	16494	948	CH 7	16489
372	CH 8	15994	950	CH 8	15993
374	CH 9	17268	952	CH 9	17266
376	CH 10	17034	954	CH 10	17051
378	CH 11	19836	956	CH 11	19834
380	CH 12	17751	958	CH 12	17727
382	CH 13	14883	960	CH 13	14882
384	CH 14	1686	962	CH 14	4258
386	CH 15	1507	964	CH 15	4083
388	REFLECTOR 1 POSITION 12	1507	966	REFLECTOR 1 POSITION 29	4267
390	REFLECTOR 2 POSITION 12	1691	968	REFLECTOR 2 POSITION 29	4088
392	REFL 1 POS 12 2ND LOOK	1510	970	REFL 1 POS 29 2ND LOOK	16134
	REFL 2 POS 12 2ND LOOK	16190		REFL 2 POS 29 2ND LOOK	
	SCENE DATA BP 12			SCENE DATA BP 29	
	CH 3			CH 3	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16279	972	CH 4	16301
396	CH 5	17393	974	CH 5	17426
398	CH 6	16799	976	CH 6	16796
400	CH 7	16633	978	CH 7	16629
402	CH 8	16371	980	CH 8	16412
404	CH 9	16495	982	CH 9	16493
406	CH 10	15995	984	CH 10	15995
408	CH 11	17267	986	CH 11	17263
410	CH 12	17044	988	CH 12	17040
412	CH 13	19846	990	CH 13	19832
414	CH 14	17730	992	CH 14	17731
416	CH 15	14883	994	CH 15	14883
418	REFLECTOR 1 POSITION 13	1839	996	REFLECTOR 1 POSITION 30	4419
420	REFLECTOR 2 POSITION 13	1659	998	REFLECTOR 2 POSITION 30	4236
422	REFL 1 POS 13 2ND LOOK	1843	1000	REFL 1 POS 30 2ND LOOK	4422
424	REFL 2 POS 13 2ND LOOK	1661	1002	REFL 2 POS 30 2ND LOOK	4240
426	SCENE DATA BP 13	16166	1004	SCENE DATA BP 30	16198
428	CH 3	16283	1006	CH 3	16291
430	CH 4	17404	1008	CH 4	17403
432	CH 5	16814	1010	CH 5	16795
434	CH 6	16652	1012	CH 6	16635
436	CH 7	16387	1014	CH 7	16376
438	CH 8	16510	1016	CH 8	16486
440	CH 9	15996	1018	CH 9	15994
442	CH 10	17285	1020	CH 10	17264
444	CH 11	17063	1022	CH 11	17043
446	CH 12	19845	1024	CH 12	19840
448	CH 13	17738	1026	CH 13	17766
450	CH 14	14892	1028	CH 14	14882
452	REFLECTOR 1 POSITION 14	1989	1030	REFLECTOR 1 COLD CAL POS	6017
454	REFLECTOR 2 POSITION 14	1807	1032	REFLECTOR 2 COLD CAL POS	5834
456	REFL 1 POS 14 2ND LOOK	1994	1034	REFL 1 COLD CAL 2ND LOOK	6017
458	REFL 2 POS 14 2ND LOOK	1812	1036	REFL 2 COLD CAL 2ND LOOK	5833
460	SCENE DATA BP 14	16167	1038	COLD CAL DATA 1	16212
462	CH 3	16282	1040	CH 3	16281
464	CH 4	17406	1042	CH 4	17401
466	CH 5	16809	1044	CH 5	16795
468	CH 6	16651	1046	CH 6	16634
470	CH 7	16365	1048	CH 7	16390
472	CH 8	16504	1050	CH 8	16492
474	CH 9	16024	1052	CH 9	15991
476	CH 10	17276	1054	CH 10	17264
478	CH 11	17050	1056	CH 11	17036
480	CH 12	19851	1058	CH 12	19850
482	CH 13	17755	1060	CH 13	17758
484	CH 14	14891	1062	CH 14	14881
486	REFLECTOR 1 POSITION 15	2143	1064	REFLECTOR 1 COLD CAL DATA 2	16217
488	REFLECTOR 2 POSITION 15	1964	1066	REFLECTOR 2 COLD CAL DATA 2	16284
490	REFL 1 POS 15 2ND LOOK	2146	1068	REFL 1 POS 30 2ND LOOK	17396
492	REFL 2 POS 15 2ND LOOK	1964	1070	REFL 2 POS 30 2ND LOOK	16794

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	16195	1072	CH	16635
496		16288	1074	CH	16386
498		17407	1076	CH	16489
500		16814	1078	CH	16001
502		16656	1080	CH	17265
504		16382	1082	CH	17043
506		16512	1084	CH	19845
508		16002	1086	CH	17739
510		17275	1088	CH	14882
512		17051	1182	REFLECTOR 1 WARM CAL POS	10415
514		19838	1184	REFLECTOR 2 WARM CAL POS	10232
516		17754	1186	REFL 1 WARM CAL 2ND LOOK	10416
518		14894	1188	REFL 2 WARM CAL 2ND LOOK	10232
520	REFLECTOR 1 POSITION 16	22294	1190	WARM CAL DATA 1	16175
522	REFLECTOR 2 POSITION 16	21114	1192		16267
524	REFL 1 POS 16 2ND LOOK	22298	1194	CH	17391
526	REFL 2 POS 16 2ND LOOK	21115	1196	CH	16787
528	SCENE DATA BP 16	16221	1198	CH	16625
530		16304	1200	CH	16370
532		17409	1202	CH	16485
534		16809	1204	CH	15988
536		16649	1206	CH	17253
538		16387	1208	CH	17040
540		16507	1210	CH	19833
542		15995	1212	CH	17757
544		17280	1214	CH	14878
546		17049	1216	CH	16172
548		19851	1218	CH	16268
550		17760	1220	CH	17388
552		14888	1222	CH	16787
554	REFLECTOR 1 POSITION 17	2444	1224	CH	16622
556	REFLECTOR 2 POSITION 17	2262	1226	CH	16366
558	REFL 1 POS 17 2ND LOOK	2450	1228	CH	16486
560	REFL 2 POS 17 2ND LOOK	2265	1230	CH	15986
562	SCENE DATA BP 17	16178	1232	CH	17258
564		16285	1234	CH	17035
566		17415	1236	CH	19844
568		16812	1238	CH	17713
570		16649	1240	CH	14877

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
1090	SCAN MOTOR A1-1	17651	22.91	1
1092	SCAN MOTOR A1-2	18508	23.36	1
1094	FEEDHORN A1-1	18940	24.79	1
1096	FEEDHORN A1-2	19633	26.14	1
1098	RF MUX A1-1	20038	26.44	1
1100	RF MUX A1-2	20851	28.00	1
1102	LOCAL OSCILLATOR CHANNEL 3	21526	29.23	1
1104	LOCAL OSCILLATOR CHANNEL 4	21477	28.82	1
1106	LOCAL OSCILLATOR CHANNEL 5	21290	28.98	1
1108	LOCAL OSCILLATOR CHANNEL 6	19758	26.26	1
1110	LOCAL OSCILLATOR CHANNEL 7	20382	27.24	1
1112	LOCAL OSCILLATOR CHANNEL 8	20677	28.71	1
1114	LOCAL OSCILLATOR CHANNEL 15	21105	28.07	1
1116	PLL LO #2 CHANNELS 9 THROUGH 14	20856	28.02	1
1118	PLL LO #1 CHANNELS 9 THROUGH 14	20681	27.69	1
1120	SPARE (NOT USED)	32767	51.27	1
1122	MIXER/IF AMPLIFIER CHANNEL 3	21523	28.41	1
1124	MIXER/IF AMPLIFIER CHANNEL 4	21488	28.54	1
1126	MIXER/IF AMPLIFIER CHANNEL 5	21139	28.26	1
1128	MIXER/IF AMPLIFIER CHANNEL 6	20210	26.85	1
1130	MIXER/IF AMPLIFIER CHANNEL 7	20263	27.19	1
1132	MIXER/IF AMPLIFIER CHANNEL 8	21268	28.45	1
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20315	26.55	1
1136	MIXER/IF AMPLIFIER CHANNEL 15	20747	28.33	1
1138	IF AMPLIFIER CHANNEL 11 THRU 14	20661	27.76	1
1140	IF AMPLIFIER CHANNEL 9	20691	27.87	1
1142	IF AMPLIFIER CHANNEL 10	20857	27.89	1
1144	IF AMPLIFIER CHANNEL 11	20019	26.59	1
1146	DC/DC CONVERTER	20855	28.08	1
1148	IF AMPLIFIER CHANNEL 13	20043	26.61	1
1150	IF AMPLIFIER CHANNEL 14	20153	26.92	1
1152	IF AMPLIFIER CHANNEL 12	19938	26.52	1
1154	RF SHELF A1-1	19705	26.93	1
1156	RF SHELF A1-2	20609	27.82	1
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	19012	24.98	1
1160	A1-1 WARM LOAD 1	23254	22.85	1
1162	A1-1 WARM LOAD 2	23008	22.79	1
1164	A1-1 WARM LOAD 3	23237	22.87	1
1166	A1-1 WARM LOAD 4	23174	22.82	1
1168	A1-1 WARM LOAD CENTER	23255	22.95	1
1170	A1-2 WARM LOAD 1	23552	23.84	1
1172	A1-2 WARM LOAD 2	23706	23.78	1
1174	A1-2 WARM LOAD 3	23863	23.90	1
1176	A1-2 WARM LOAD 4	23634	23.91	1
1178	A1-2 WARM LOAD CENTER	23532	23.82	1
1180	TEMP. SENSOR REFERENCE VOLTAGE	25319		

DESCRIPTION

STATUS

STATUS

STATUS

SCANNER A1-1 POWER	ON		ON
SCANNER A1-2 POWER	ON		ON
PLL POWER	ON		ON
ANTENNA IN WARM CAL POSITION MODE	PLLO # 2	PLLO # 2	PLLO # 2
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO
ANTENNA IN NADIR POSITION MODE	NO	NO	NO
ANTENNA IN FULL SCAN MODE	YES	YES	YES
SURVIVAL HEATER POWER	OFF	OFF	OFF
MODULE POWER	CONNECT	CONNECT	CONNECT
COLD CAL POSITION MSB	ZERO	ZERO	ZERO
COLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA

DESCRIPTION

VALUE

DEG C

VALUE

DEG C

VALUE

DEG C

A1-1 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0	214	18.0
A1-2 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4	215	19.4
A1-1 RF SHELF TEMPERATURE	216	20.7	216	20.7	216	20.7
A1-2 RF SHELF TEMPERATURE	217	22.1	217	22.1	217	22.1
A1-1 WARM LOAD TEMPERATURE	214	18.0	214	18.0	214	18.0
A1-2 WARM LOAD TEMPERATURE	215	19.4	215	19.4	215	19.4

DESCRIPTION

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	83	38.68	83	38.68	83	38.68
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	84	39.14	83	38.68	83	38.68
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	169	14.58	169	14.58	169	14.58
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	146	-15.25	146	-15.25	146	-15.25
RECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	145	4.83	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	144	4.80	144	4.80	144	4.80
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76	169	9.76
PHASE LOCK LOOP (CHANNEL 9/14)	144	14.58	144	14.58	144	14.58
PHASE LOCK LOOP (CHANNEL 9/14)	144	-15.35	144	-15.35	144	-15.35
L.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 3)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78	171	9.78
PLLO # 2 LOCK DETECT	219	4.38	219	4.38	219	4.38
PLLO # 1 LOCK DETECT	1	0.02	1	0.02	1	0.02
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

AMSU A1-33 A1.EXE FULL SCAN MODE P2 20-NOV-99 09:50:16 SCAN NUMBER 619
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

COMMANDS
[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLLO # 2 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 3

POST-HIGH FREQ 6.67Hz PLB

3.2.4.2.2.9.3

NO: 748613 OA: 0810
P/N: 133720-3-II SN: 109

1ST CPT

TDS 51

139
T

TEST ENG: (A)

11/20/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	111111111	572	SCENE DATA	16371
2	SYNC SEQUENCE	111111111	574	BP	16476
3	SYNC SEQUENCE	111111111	576		15997
4	UNIT ID AND SERIAL NO	00100001	578		17282
5	DIGITAL B DATA	00000010	580		17047
6	DIGITAL B DATA	00000110	582		19832
7	DIGITAL B DATA	00000000	584		17757
8	DIGITAL B DATA	00000000	586		14861
10	REFLECTOR 1 POSITION	16225	588	REFLECTOR 1 POSITION	2597
12	REFLECTOR 2 POSITION	16225	590	REFLECTOR 2 POSITION	2417
14	REFL 1 POS	16225	592	REFL 1 POS	2601
16	REFL 2 POS	16180	594	REFL 2 POS	2419
18	SCENE DATA	16258	596	SCENE DATA	16175
20		17383	598		16256
22		16619	600		17392
24		16372	602		16636
26		16461	604		16379
28		15966	606		16469
30		17260	610		15978
32		17026	612		17276
34		19817	614		17037
36		17764	616		19822
38		14852	618		17751
40		167	620		14863
42	REFLECTOR 1 POSITION	16371	622	REFLECTOR 1 POSITION	2748
44	REFLECTOR 2 POSITION	174	624	REFLECTOR 2 POSITION	2567
46	REFL 1 POS	16375	626	REFL 1 POS	2753
48	REFL 2 POS	16188	628	REFL 2 POS	2571
50	SCENE DATA	16253	630	SCENE DATA	16161
52		17374	632		16241
54		16615	634		17369
56		16457	636		16773
58		15969	638		16618
60		17261	640		16348
62		17028	642		16457
64		19845	644		15970
66		17761	646		17263
68		14853	650		17032
70		323	652		19828
72		144	654		17761
74		326	656	REFLECTOR 1 POSITION	14855
76		148	658	REFLECTOR 2 POSITION	2899
78		16155	660	REFL 1 POS	2717
80		16241	662	REFL 2 POS	2905
82		17370	664	REFL 2 POS	2722
84		16777	666	SCENE DATA	16166
86			668		16239
88			670		17371
90					16775

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH	16623	672	CH	16618
96	CH	16347	674	CH	16352
98	CH	16464	676	CH	16462
100	CH	15978	678	CH	15969
102	CH	17266	680	CH	17270
104	CH	17033	682	CH	17041
106	CH	19824	684	CH	19814
108	CH	17758	686	CH	17736
110	CH	14857	688	CH	14853
112	REFLECTOR 1 POSITION	475	690	REFLECTOR 1 POSITION	30522
114	REFLECTOR 2 POSITION	297	692	REFLECTOR 2 POSITION	2868
116	REFL 1 POS	478	694	REFL 1 POS	3056
118	REFL 2 POS	300	696	REFL 2 POS	2874
120	SCENE DATA	16160	698	SCENE DATA	16166
122	CH	16244	700	CH	16243
124	CH	17365	702	CH	17366
126	CH	16785	704	CH	16775
128	CH	16621	706	CH	16616
130	CH	16354	708	CH	16350
132	CH	16468	710	CH	16456
134	CH	15985	712	CH	15968
136	CH	17274	714	CH	17269
138	CH	17027	716	CH	17037
140	CH	19823	718	CH	19822
142	CH	17743	720	CH	17756
144	CH	14858	722	CH	14852
146	REFLECTOR 1 POSITION	625	724	REFLECTOR 1 POSITION	3201
148	REFLECTOR 2 POSITION	445	726	REFLECTOR 2 POSITION	3023
150	REFL 1 POS	632	728	REFL 1 POS	3026
152	REFL 2 POS	448	730	REFL 2 POS	3028
154	SCENE DATA	16162	732	SCENE DATA	16159
156	CH	16242	734	CH	16242
158	CH	17369	736	CH	17374
160	CH	16783	738	CH	16771
162	CH	16628	740	CH	16617
164	CH	16353	742	CH	16356
166	CH	16470	744	CH	16460
168	CH	15988	746	CH	15972
170	CH	17263	748	CH	17267
172	CH	17038	750	CH	17028
174	CH	19835	752	CH	19826
176	CH	17775	754	CH	17764
178	CH	14858	756	CH	14853
180	REFLECTOR 1 POSITION	777	758	REFLECTOR 1 POSITION	33550
182	REFLECTOR 2 POSITION	594	760	REFLECTOR 2 POSITION	3172
184	REFL 1 POS	782	762	REFL 1 POS	3357
186	REFL 2 POS	599	764	REFL 2 POS	3177
188	SCENE DATA	16163	766	SCENE DATA	16159
190	CH	16246	768	CH	16243
192	CH	17368	770	CH	17369

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16787	772	CH 6	16769
196	CH 7	16630	774	CH 7	16616
198	CH 8	16354	776	CH 8	16356
200	CH 9	16472	778	CH 9	16458
202	CH 10	15973	780	CH 10	15971
204	CH 11	17274	782	CH 11	17265
206	CH 12	17043	784	CH 12	17030
208	CH 13	19836	786	CH 13	19816
210	CH 14	17754	788	CH 14	17735
212	CH 15	14864	790	CH 15	14852
214	REFLECTOR 1 POSITION 7	928	792	REFLECTOR 1 POSITION 24	3504
216	REFLECTOR 2 POSITION 7	749	794	REFLECTOR 2 POSITION 24	3325
218	REFL 1 POS 7	933	796	REFL 1 POS 24	3508
220	REFL 2 POS 7	748	798	REFL 2 POS 24	3330
222	SCENE DATA BP 7	16170	800	SCENE DATA BP 24	16166
224	CH 3	16243	802	CH 3	16244
226	CH 4	17365	804	CH 4	17373
228	CH 5	16775	806	CH 5	16772
230	CH 6	16615	808	CH 6	16611
232	CH 7	16353	810	CH 7	16351
234	CH 8	16463	812	CH 8	16458
236	CH 9	15969	814	CH 9	15972
238	CH 10	17265	816	CH 10	17262
240	CH 11	17022	818	CH 11	17029
242	CH 12	19820	820	CH 12	19818
244	CH 13	17756	822	CH 13	17755
246	CH 14	14854	824	CH 14	14852
248	CH 15	11079	826	CH 15	36533
250	REFLECTOR 1 POSITION 8	1899	828	REFLECTOR 1 POSITION 25	3476
252	REFLECTOR 2 POSITION 8	1084	830	REFLECTOR 2 POSITION 25	3659
254	REFL 1 POS 8	903	832	REFL 1 POS 25	3481
256	REFL 2 POS 8	16155	834	REFL 2 POS 25	16154
258	SCENE DATA BP 8	16243	836	SCENE DATA BP 25	16243
260	CH 3	17371	838	CH 3	17373
262	CH 4	16771	840	CH 4	16770
264	CH 5	16616	842	CH 5	16615
266	CH 6	16351	844	CH 6	16354
268	CH 7	16461	846	CH 7	16460
270	CH 8	15970	848	CH 8	15973
272	CH 9	17262	850	CH 9	17265
274	CH 10	17036	852	CH 10	17030
276	CH 11	19829	854	CH 11	19827
278	CH 12	17753	856	CH 12	17748
280	CH 13	14854	858	CH 13	14853
282	CH 14	12332	860	CH 14	3805
284	CH 15	10522	862	CH 15	3626
286	REFLECTOR 1 POSITION 9	10522	864	REFLECTOR 1 POSITION 26	3812
288	REFLECTOR 2 POSITION 9	10536	866	REFLECTOR 2 POSITION 26	3632
290	REFL 1 POS 9	1054	868	REFL 1 POS 26	16178
292	REFL 2 POS 9	16160	870	REFL 2 POS 26	16247
	SCENE DATA BP 9	16246		SCENE DATA BP 26	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17377	872	CH 5	17370
296	CH 6	16770	874	CH 6	16773
298	CH 7	16616	876	CH 7	16614
300	CH 8	16358	878	CH 8	16357
302	CH 9	16458	880	CH 9	16461
304	CH 10	15977	882	CH 10	15973
306	CH 11	17265	884	CH 11	17265
308	CH 12	17031	886	CH 12	17035
310	CH 13	19807	888	CH 13	19825
312	CH 14	17746	890	CH 14	17761
314	CH 15	14852	892	CH 15	14853
316	REFLECTOR 1 POSITION 10	1385	894	REFLECTOR 1 POSITION 27	3969
318	REFLECTOR 2 POSITION 10	1204	896	REFLECTOR 2 POSITION 27	3780
320	REFL 1 POS 10	1389	898	REFL 1 POS 27	3971
322	REFL 2 POS 10	1205	900	REFL 2 POS 27	3785
324	SCENE DATA BP 10	16174	902	SCENE DATA BP 27	16157
326	CH 3	16247	904	CH 3	16252
328	CH 4	17371	906	CH 4	17379
330	CH 5	16771	908	CH 5	16773
332	CH 6	16616	910	CH 6	16616
334	CH 7	16355	912	CH 7	16354
336	CH 8	16457	914	CH 8	16457
338	CH 9	15971	916	CH 9	15970
340	CH 10	17265	918	CH 10	17264
342	CH 11	17032	920	CH 11	17022
344	CH 12	19832	922	CH 12	19810
346	CH 13	17764	924	CH 13	17743
348	CH 14	14852	926	CH 14	14852
350	CH 15	1535	928	CH 15	4110
352	REFLECTOR 1 POSITION 11	1356	930	REFLECTOR 1 POSITION 28	3937
354	REFLECTOR 2 POSITION 11	1538	932	REFLECTOR 2 POSITION 28	4114
356	REFL 1 POS 11	1357	934	REFL 1 POS 28	3936
358	REFL 2 POS 11	1357	936	REFL 2 POS 28	16147
360	SCENE DATA BP 11	16149	938	SCENE DATA BP 28	16251
362	CH 3	16247	940	CH 3	17376
364	CH 4	17379	942	CH 4	16770
366	CH 5	16772	944	CH 5	16616
368	CH 6	16618	946	CH 6	16352
370	CH 7	16354	948	CH 7	16457
372	CH 8	16464	950	CH 8	15966
374	CH 9	15973	952	CH 9	17272
376	CH 10	17272	954	CH 10	17034
378	CH 11	17039	956	CH 11	19825
380	CH 12	19821	958	CH 12	17765
382	CH 13	17729	960	CH 13	14853
384	CH 14	14852	962	CH 14	4260
386	CH 15	1686	964	CH 15	4082
388	REFLECTOR 1 POSITION 12	1507	966	REFLECTOR 1 POSITION 29	4267
390	REFLECTOR 2 POSITION 12	1691	968	REFLECTOR 2 POSITION 29	4087
392	REFL 1 POS 12	1509	970	REFL 1 POS 29	16121
	REFL 2 POS 12	16179		REFL 2 POS 29	
	SCENE DATA BP 12			SCENE DATA BP 29	
	CH 3			CH 3	

AMSU A1_33 A1.EXE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16246	972	REFLECTOR 1 POSITION 30	16275
396	CH 5	17371	974	REFLECTOR 2 POSITION 30	17406
398	CH 6	16776	976	REFL 1 POS 30 2ND LOOK	16773
400	CH 7	16617	978	REFL 2 POS 30 2ND LOOK	16620
402	CH 8	16356	980	SCENE DATA BP 30	16397
404	CH 9	16457	982	CH 3	16458
406	CH 10	15978	984	CH 4	15973
408	CH 11	17272	986	CH 5	17266
410	CH 12	17036	988	CH 6	17023
412	CH 13	19809	990	CH 7	19820
414	CH 14	17764	992	CH 8	17728
416	CH 15	14852	994	CH 9	14851
418	REFLECTOR 1 POSITION 13	1839	996	CH 10	4418
420	REFLECTOR 2 POSITION 13	1659	998	CH 11	4235
422	REFL 1 POS 13 2ND LOOK	1843	1000	CH 12	4422
424	REFL 2 POS 13 2ND LOOK	1660	1002	CH 13	4239
426	SCENE DATA BP 13	16150	1004	CH 14	16188
428	CH 3	16253	1006	CH 15	16262
430	CH 4	17379	1008	CH 30	17379
432	CH 5	16786	1010	CH 30	16616
434	CH 6	16632	1012	CH 30	16359
436	CH 7	16367	1014	CH 30	16457
438	CH 8	16476	1016	CH 30	15970
440	CH 9	15975	1018	CH 30	17261
442	CH 10	17286	1020	CH 30	17033
444	CH 11	17049	1022	CH 30	19825
446	CH 12	19844	1024	CH 30	17758
448	CH 13	17752	1026	CH 30	14852
450	CH 14	14861	1028	CH 30	6017
452	CH 15	1990	1030	REFLECTOR 1 COLD CAL POS	5834
454	REFLECTOR 1 POSITION 14	1808	1032	REFLECTOR 2 COLD CAL POS	6017
456	REFL 1 POS 14 2ND LOOK	1994	1034	REFL 1 COLD CAL 2ND LOOK	5833
458	REFL 2 POS 14 2ND LOOK	1812	1036	REFL 2 COLD CAL 2ND LOOK	16208
460	SCENE DATA BP 14	16154	1038	COLD CAL DATA 1	16255
462	CH 3	16249	1040	CH 3	17376
464	CH 4	17384	1042	CH 4	16772
466	CH 5	16790	1044	CH 5	16619
468	CH 6	16633	1046	CH 6	16369
470	CH 7	16351	1048	CH 7	16459
472	CH 8	16476	1050	CH 8	15971
474	CH 9	16000	1052	CH 9	17268
476	CH 10	17279	1054	CH 10	17030
478	CH 11	17038	1056	CH 11	19811
480	CH 12	19831	1058	CH 12	17770
482	CH 13	17767	1060	CH 13	14852
484	CH 14	14860	1062	CH 14	16205
486	CH 15	2144	1064	CH 15	16256
488	REFLECTOR 1 POSITION 15	1964	1066	CH 3	17376
490	REFLECTOR 2 POSITION 15	2146	1070	CH 4	16772
492	REFL 1 POS 15 2ND LOOK	1964			
	REFL 2 POS 15 2ND LOOK	1964			

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	16179	1072		16618
496		16259	1074		16368
498		17381	1076		16460
500		16793	1078		15977
502		16643	1080		17266
504		16359	1082		17027
506		16478	1084		19803
508		15976	1086		17735
510		17280	1088		14852
512		17038	1182	REFLECTOR 1 WARM CAL POS	10416
514		19831	1184	REFLECTOR 2 WARM CAL POS	10233
516		17751	1186	REFL 1 WARM CAL 2ND LOOK	10416
518		14863	1188	REFL 2 WARM CAL 2ND LOOK	10232
520	REFLECTOR 1 POSITION 16	22993	1190	WARM CAL DATA 1	16154
522	REFLECTOR 2 POSITION 16	2113	1192		16240
524	REFL 1 POS 16 2ND LOOK	2298	1194		17365
526	REFL 2 POS 16 2ND LOOK	2114	1196		16761
528	SCENE DATA BP 16	16212	1198		16606
530		16275	1200		16347
532		17387	1202		16449
534		16785	1204		15967
536		16631	1206		17259
538		16370	1208		17025
540		16475	1210		19798
542		15976	1212		17745
544		17278	1214		14848
546		17035	1216	WARM CAL DATA 2	16159
548		19807	1218		16240
550		17752	1220		17368
552		14858	1222		16761
554	REFLECTOR 1 POSITION 17	2444	1224		16609
556	REFLECTOR 2 POSITION 17	2262	1226		16353
558	REFL 1 POS 17 2ND LOOK	2449	1228		16452
560	REFL 2 POS 17 2ND LOOK	2265	1230		15977
562	SCENE DATA BP 17	16167	1232		17257
564		16251	1234		17024
566		17391	1236		19807
568		16784	1238		17733
570		16626	1240		14848

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
1090	SCAN MOTOR A1-1	17684	22.98	
1092	SCAN MOTOR A1-2	18540	23.42	
1094	FEEDHORN A1-1	18960	24.83	
1096	FEEDHORN A1-2	19644	26.16	
1098	RF MUX A1-1	20132	26.62	
1100	RF MUX A1-2	20936	28.16	
1102	LOCAL OSCILLATOR CHANNEL 3	21837	29.82	
1104	LOCAL OSCILLATOR CHANNEL 4	21820	29.48	
1106	LOCAL OSCILLATOR CHANNEL 5	21550	29.48	
1108	LOCAL OSCILLATOR CHANNEL 6	19999	26.72	
1110	LOCAL OSCILLATOR CHANNEL 7	20586	27.62	
1112	LOCAL OSCILLATOR CHANNEL 8	20940	29.22	
1114	LOCAL OSCILLATOR CHANNEL 15	21233	28.31	
1116	PLL LO #2 CHANNELS 9 THROUGH 14	21730	29.69	
1118	PLL LO #1 CHANNELS 9 THROUGH 14	20501	27.35	
1120	SPARE (NOT USED)	32767	51.27	
1122	MIXER/IF AMPLIFIER CHANNEL 3	21618	28.59	
1124	MIXER/IF AMPLIFIER CHANNEL 4	21593	28.74	
1126	MIXER/IF AMPLIFIER CHANNEL 5	21243	28.46	
1128	MIXER/IF AMPLIFIER CHANNEL 6	20338	27.09	
1130	MIXER/IF AMPLIFIER CHANNEL 7	20370	27.39	
1132	MIXER/IF AMPLIFIER CHANNEL 8	21396	28.69	
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20357	28.62	
1136	MIXER/IF AMPLIFIER CHANNEL 15	20986	28.79	
1138	IF AMPLIFIER CHANNEL 11 THRU 14	20763	27.95	
1140	IF AMPLIFIER CHANNEL 9	20801	28.08	
1142	IF AMPLIFIER CHANNEL 10	20969	28.10	
1144	IF AMPLIFIER CHANNEL 11	20133	26.80	
1146	DC/DC CONVERTER	21341	28.99	
1148	IF AMPLIFIER CHANNEL 13	20154	26.82	
1150	IF AMPLIFIER CHANNEL 14	20261	27.12	
1152	IF AMPLIFIER CHANNEL 12	20048	26.73	
1154	RF SHELF A1-1	19842	27.19	
1156	RF SHELF A1-2	20742	28.07	
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	19043	25.04	
1160	A1-1 WARM LOAD 1	23276	22.89	
1162	A1-1 WARM LOAD 2	23031	22.84	
1164	A1-1 WARM LOAD 3	23261	22.91	
1166	A1-1 WARM LOAD 4	23198	22.87	
1168	A1-1 WARM LOAD CENTER	23282	23.01	
1170	A1-2 WARM LOAD 1	23580	23.90	
1172	A1-2 WARM LOAD 2	23737	23.84	
1174	A1-2 WARM LOAD 3	23893	23.96	
1176	A1-2 WARM LOAD 4	23671	23.98	
1178	A1-2 WARM LOAD CENTER	23560	23.87	
1180	TEMP SENSOR REFERENCE VOLTAGE	25321		

DESCRIPTION

STATUS

STATUS

DESCRIPTION	STATUS	STATUS
SCANNER A1-1 POWER	ON	ON
SCANNER A1-2 POWER	ON	ON
PLL POWER	ON	ON
ANTENNA IN WARM CAL POSITION MODE	PLLO # 2	PLLO # 2
ANTENNA IN COLD CAL POSITION MODE	NO	NO
ANTENNA IN NADIR POSITION MODE	NO	NO
ANTENNA IN FULL SCAN MODE	NO	NO
SURVIVAL HEATER POWER	YES	YES
MODULE POWER	OFF	OFF
COLD CAL POSITION MSB	CONNECT	CONNECT
COLD CAL POSITION LSB	ZERO	ZERO

ANALOG DATA
DESCRIPTION

VALUE

DEG C

VALUE

DEG C

DESCRIPTION	VALUE	DEG C	VALUE	DEG C
A1-1 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0
A1-2 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4
A1-1 RF SHELF TEMPERATURE	216	20.7	216	20.7
A1-2 RF SHELF TEMPERATURE	217	22.1	218	23.4
A1-1 WARM LOAD TEMPERATURE	214	18.0	214	18.0
A1-2 WARM LOAD TEMPERATURE	215	19.4	215	19.4

DESCRIPTION

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

DESCRIPTION	VALUE	AMPS/ VOLTS	VALUE	AMPS/ VOLTS
A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	83	38.68	83	38.68
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	83	38.68	83	38.68
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	169	14.58	169	14.58
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	146	-15.25	146	-15.25
RECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	144	4.80	144	4.80
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76
PHASE LOCK LOOP (CHANNEL 9/14)	144	14.58	144	14.58
PHASE LOCK LOOP (CHANNEL 9/14)	144	-15.35	144	-15.35
L.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 3)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78
PLLO # 2 LOCK DETECT	219	4.38	219	4.38
PLLO # 1 LOCK DETECT	1	0.02	1	0.02
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

AMSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 11:32:07 SCAN NUMBER 1001
 [5] DIGITAL A DATA ELEMENT 0000
 [6] DIGITAL B DATA ELEMENT 00
 [7] ANALOG DATA ELEMENT 00

COMMANDS
 [9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
 [10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
 [11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
 [12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL0 # 1 [18]
 [13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
 [14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]
 POWER [4] ON
 SELECT TOUCHSCREEN BUTTON 3 PRINT [3] FULL [1] RETURN

ATB Low FREQ TRANSIENTS

3.2.4.2.3.3.2

PRE - INJECTION

TDS 51

S/O: 748613 OP: 0810 1ST CPT
 P/N: 1331720-3-IT SN: 109

(139/T)

TEST ENG: (TA) DATE: 11/20/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE BYTE 1	11111111	572	SCENE DATA BP 17	CH 8
2	SYNC SEQUENCE BYTE 2	11111111	574		CH 9
3	SYNC SEQUENCE BYTE 3	11111111	576		CH 10
4	UNIT ID AND SERIAL NO	00100001	578		CH 11
5	DIGITAL B DATA BYTE 1	00000010	580		CH 12
6	DIGITAL B DATA BYTE 2	00001110	582		CH 13
7	DIGITAL B DATA BYTE 3	00000000	584		CH 14
8	DIGITAL B DATA BYTE 4	00000000	586		CH 15
10	REFLECTOR 1 POSITION	23	588	REFLECTOR 1 POSITION 18	2597
12	REFLECTOR 2 POSITION	16225	590	REFLECTOR 2 POSITION 18	2416
14	REFL 1 POS 1 2ND LOOK	16225	592	REFL 1 POS 18 2ND LOOK	2601
16	REFL 2 POS 1 2ND LOOK	16197	594	REFL 2 POS 18 2ND LOOK	2420
18	SCENE DATA BP 1	16299	596	SCENE DATA BP 18	16182
20		17419	598		16296
22		16781	600		17430
24		16628	602		16797
26		16397	604		16644
28		16458	606		16401
30		15972	608		16460
32		17276	610		15977
34		17039	612		17287
36		19837	614		17049
38		17769	616		19837
40		14868	618		17760
42		16371	620		14877
44	REFLECTOR 1 POSITION	16371	622	REFLECTOR 1 POSITION 19	2749
46	REFLECTOR 2 POSITION	174	624	REFLECTOR 2 POSITION 19	2568
48	REFL 1 POS 2 2ND LOOK	16375	626	REFL 1 POS 19 2ND LOOK	2753
50	REFL 2 POS 2 2ND LOOK	16203	628	REFL 2 POS 19 2ND LOOK	2571
52	SCENE DATA BP 2	16290	630	SCENE DATA BP 19	16181
54		17416	632		16290
56		16780	634		17408
58		16627	636		16781
60		16389	638		16625
62		16460	640		16377
64		15972	642		16456
66		17276	644		15974
68		17049	646		17274
70		19841	648		17039
72		17766	650		19838
74		14868	652		17759
76		324	654		14869
78	REFLECTOR 1 POSITION	142	656	REFLECTOR 1 POSITION 20	2898
80	REFLECTOR 2 POSITION	325	658	REFLECTOR 2 POSITION 20	2718
82	REFL 1 POS 3 2ND LOOK	148	660	REFL 1 POS 20 2ND LOOK	2904
84	REFL 2 POS 3 2ND LOOK	16167	662	REFL 2 POS 20 2ND LOOK	2722
86	SCENE DATA BP 3	16283	664	SCENE DATA BP 20	16181
88		17407	666		16287
90		16782	668		17407
92			670		16782

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16631	672	CH 7	16626
96	CH 8	16375	674	CH 8	16382
98	CH 9	16458	676	CH 9	16458
100	CH 10	15977	678	CH 10	15968
102	CH 11	17274	680	CH 11	17275
104	CH 12	17036	682	CH 12	17033
106	CH 13	19843	684	CH 13	19829
108	CH 14	17746	686	CH 14	17759
110	CH 15	14871	688	CH 15	14868
112	REFLECTOR 1 POSITION	474	690	REFLECTOR 1 POSITION	3052
114	REFLECTOR 2 POSITION	296	692	REFLECTOR 2 POSITION	2869
116	REFL 1 POS	478	694	REFL 1 POS	3056
118	REFL 2 POS	300	696	REFL 2 POS	2874
120	SCENE DATA	16171	698	SCENE DATA	16178
122	CH 3	16288	700	CH 3	16288
124	CH 4	17408	702	CH 4	17407
126	CH 5	16797	704	CH 5	16781
128	CH 6	16631	706	CH 6	16631
130	CH 7	16375	708	CH 7	16380
132	CH 8	16462	710	CH 8	16460
134	CH 9	15984	712	CH 9	15968
136	CH 10	17278	714	CH 10	17275
138	CH 11	17028	716	CH 11	17032
140	CH 12	19844	718	CH 12	19817
142	CH 13	17751	720	CH 13	17741
144	CH 14	14873	722	CH 14	14867
146	CH 15	626	724	CH 15	3201
148	REFLECTOR 1 POSITION	444	726	REFLECTOR 1 POSITION	3024
150	REFLECTOR 2 POSITION	632	728	REFLECTOR 2 POSITION	3205
152	REFL 1 POS	448	730	REFL 1 POS	3028
154	REFL 2 POS	16170	732	REFL 2 POS	16184
156	SCENE DATA	16290	734	SCENE DATA	16289
158	CH 3	17408	736	CH 3	17405
160	CH 4	16790	738	CH 4	16779
162	CH 5	16636	740	CH 5	16623
164	CH 6	16382	742	CH 6	16380
166	CH 7	16466	744	CH 7	16455
168	CH 8	15988	746	CH 8	15971
170	CH 9	17273	748	CH 9	17270
172	CH 10	17040	750	CH 10	17041
174	CH 11	19832	752	CH 11	19840
176	CH 12	17788	754	CH 12	17775
178	CH 13	14873	756	CH 13	14868
180	CH 14	778	758	CH 14	3351
182	CH 15	597	760	CH 15	3172
184	REFLECTOR 1 POSITION	781	762	REFLECTOR 1 POSITION	3357
186	REFLECTOR 2 POSITION	598	764	REFLECTOR 2 POSITION	3178
188	REFL 1 POS	16177	766	REFL 1 POS	16181
190	REFL 2 POS	16289	768	REFL 2 POS	16287
192	SCENE DATA	17406	770	SCENE DATA	17408

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16793	772	CH 6	16781
196	CH 7	16637	774	CH 7	16624
198	CH 8	16380	776	CH 8	16380
200	CH 9	16474	778	CH 9	16458
202	CH 10	15979	780	CH 10	15967
204	CH 11	17280	782	CH 11	17267
206	CH 12	17041	784	CH 12	17037
208	CH 13	19851	786	CH 13	19825
210	CH 14	17771	788	CH 14	17759
212	CH 15	14877	790	CH 15	14868
214	REFLECTOR 1 POSITION	929	792	REFLECTOR 1 POSITION	3504
216	REFLECTOR 2 POSITION	749	794	REFLECTOR 2 POSITION	3326
218	REFL 1 POS	933	796	REFL 1 POS	3508
220	REFL 2 POS	748	798	REFL 2 POS	3330
222	SCENE DATA	16182	800	SCENE DATA	16179
224	CH 3	16287	802	CH 3	16289
226	CH 4	17405	804	CH 4	17407
228	CH 5	16779	806	CH 5	16625
230	CH 6	16627	808	CH 6	16376
232	CH 7	16377	810	CH 7	16454
234	CH 8	16460	812	CH 8	15972
236	CH 9	15967	814	CH 9	17271
238	CH 10	17280	816	CH 10	17045
240	CH 11	17031	818	CH 11	19828
242	CH 12	19843	820	CH 12	17748
244	CH 13	17762	822	CH 13	14868
246	CH 14	14869	824	CH 14	3653
248	CH 15	1079	826	CH 15	3477
250	REFLECTOR 1 POSITION	899	828	REFLECTOR 1 POSITION	3659
252	REFLECTOR 2 POSITION	1085	830	REFLECTOR 2 POSITION	3480
254	REFL 1 POS	903	832	REFL 1 POS	16169
256	REFL 2 POS	16176	834	REFL 2 POS	16287
258	SCENE DATA	16291	836	SCENE DATA	17406
260	CH 3	17408	838	CH 3	16625
262	CH 4	16781	840	CH 4	16378
264	CH 5	16624	842	CH 5	16455
266	CH 6	16376	844	CH 6	15976
268	CH 7	16460	846	CH 7	17272
270	CH 8	15972	848	CH 8	17047
272	CH 9	17273	850	CH 9	19838
274	CH 10	17034	852	CH 10	17755
276	CH 11	19822	854	CH 11	14869
278	CH 12	17765	856	CH 12	3804
280	CH 13	14869	858	CH 13	3628
282	CH 14	1232	860	CH 14	3811
284	CH 15	1052	862	CH 15	3633
286	REFLECTOR 1 POSITION	1236	864	REFLECTOR 1 POSITION	16196
288	REFL 1 POS	1054	866	REFL 1 POS	16293
290	REFL 2 POS	16179	868	REFL 2 POS	
292	SCENE DATA	16294	870	SCENE DATA	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17417	872	CH 5	17411
296	CH 6	16780	874	CH 6	16785
298	CH 7	16627	876	CH 7	16625
300	CH 8	16383	878	CH 8	16384
302	CH 9	16459	880	CH 9	16455
304	CH 10	15973	882	CH 10	15976
306	CH 11	17272	884	CH 11	17276
308	CH 12	17039	886	CH 12	17041
310	CH 13	19827	888	CH 13	19835
312	CH 14	17765	890	CH 14	17763
314	CH 15	14868	892	CH 15	14867
316	REFLECTOR 1 POSITION 10	1385	894	REFLECTOR 1 POSITION 27	3969
318	REFLECTOR 2 POSITION 10	1203	896	REFLECTOR 2 POSITION 27	3780
320	REFL 1 POS 10 2ND LOOK	1389	898	REFL 1 POS 27 2ND LOOK	3972
322	REFL 2 POS 10 2ND LOOK	1205	900	REFL 2 POS 27 2ND LOOK	3785
324	SCENE DATA BP 10	16182	902	SCENE DATA BP 27	16168
326	CH 3	16289	904	CH 3	16293
328	CH 4	17408	906	CH 4	17419
330	CH 5	16785	908	CH 5	16779
332	CH 6	16628	910	CH 6	16626
334	CH 7	16379	912	CH 7	16379
336	CH 8	16457	914	CH 8	16456
338	CH 9	15975	916	CH 9	15967
340	CH 10	17279	918	CH 10	17278
342	CH 11	17038	920	CH 11	17033
344	CH 12	19845	922	CH 12	19849
346	CH 13	17760	924	CH 13	17757
348	CH 14	14869	926	CH 14	14868
350	CH 15	1534	928	CH 15	4110
352	REFLECTOR 1 POSITION 11	1355	930	REFLECTOR 1 POSITION 28	3935
354	REFLECTOR 2 POSITION 11	1538	932	REFLECTOR 2 POSITION 28	4114
356	REFL 1 POS 11 2ND LOOK	1357	934	REFL 1 POS 28 2ND LOOK	3936
358	REFL 2 POS 11 2ND LOOK	1357	936	REFL 2 POS 28 2ND LOOK	16163
360	SCENE DATA BP 11	16165	938	SCENE DATA BP 28	16292
362	CH 3	16289	940	CH 3	17414
364	CH 4	17411	942	CH 4	16780
366	CH 5	16627	944	CH 5	16627
368	CH 6	16385	946	CH 6	16374
370	CH 7	16455	948	CH 7	16452
372	CH 8	15973	950	CH 8	15972
374	CH 9	17273	952	CH 9	17275
376	CH 10	17029	954	CH 10	17042
378	CH 11	19835	956	CH 11	19835
380	CH 12	17759	958	CH 12	17761
382	CH 13	14869	960	CH 13	14866
384	CH 14	1685	962	CH 14	4258
386	CH 15	1507	964	CH 15	4082
388	REFLECTOR 1 POSITION 12	1691	966	REFLECTOR 1 POSITION 29	4267
390	REFLECTOR 2 POSITION 12	1509	968	REFLECTOR 2 POSITION 29	4087
392	REFL 1 POS 12 2ND LOOK	16189	970	REFL 1 POS 29 2ND LOOK	16131
	REFL 2 POS 12 2ND LOOK			REFL 2 POS 29 2ND LOOK	
	SCENE DATA BP 12			SCENE DATA BP 29	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16288	972	REFLECTOR 1 POSITION 30	16314
396	CH 5	17409	974	REFLECTOR 2 POSITION 30	17436
398	CH 6	16783	976	REFL 1 POS 30	16784
400	CH 7	16630	978	REFL 2 POS 30	16629
402	CH 8	16379	980	SCENE DATA BP 30	16412
404	CH 9	16463	982	CH 3	16454
406	CH 10	15976	984	CH 4	15972
408	CH 11	17279	986	CH 5	17273
410	CH 12	17043	988	CH 6	17039
412	CH 13	19836	990	CH 7	19844
414	CH 14	17798	992	CH 8	17760
416	CH 15	14868	994	CH 9	14869
418	REFLECTOR 1 POSITION 13	1840	996	CH 10	4419
420	REFLECTOR 2 POSITION 13	1657	998	CH 11	4237
422	REFL 1 POS 13	1843	1000	CH 12	4421
424	REFL 2 POS 13	1661	1002	CH 13	4240
426	SCENE DATA BP 13	16167	1004	CH 14	16203
428	CH 3	16296	1006	CH 15	16300
430	CH 4	17413	1008	CH 1	17419
432	CH 5	16797	1010	CH 2	16780
434	CH 6	16639	1012	CH 3	16626
436	CH 7	16389	1014	CH 4	16386
438	CH 8	16471	1016	CH 5	16455
440	CH 9	15973	1018	CH 6	15973
442	CH 10	17289	1020	CH 7	17275
444	CH 11	17055	1022	CH 8	17036
446	CH 12	19835	1024	CH 9	19834
448	CH 13	17730	1026	CH 10	17762
450	CH 14	14878	1028	CH 11	14867
452	REFLECTOR 1 POSITION 14	1989	1030	REFLECTOR 1 COLD CAL POS	6017
454	REFLECTOR 2 POSITION 14	1807	1032	REFLECTOR 2 COLD CAL POS	5833
456	REFL 1 POS 14	1995	1034	REFL 1 COLD CAL 2ND LOOK	6017
458	REFL 2 POS 14	1812	1036	REFL 2 COLD CAL 2ND LOOK	5833
460	SCENE DATA BP 14	16166	1038	COLD CAL DATA 1	16219
462	CH 3	16292	1040	CH 3	16300
464	CH 4	17420	1042	CH 4	17409
466	CH 5	16793	1044	CH 5	16781
468	CH 6	16644	1046	CH 6	16627
470	CH 7	16378	1048	CH 7	16387
472	CH 8	16469	1050	CH 8	16455
474	CH 9	15995	1052	CH 9	15972
476	CH 10	17280	1054	CH 10	17274
478	CH 11	17041	1056	CH 11	17045
480	CH 12	19836	1058	CH 12	19824
482	CH 13	17773	1060	CH 13	17753
484	CH 14	14875	1062	CH 14	14868
486	CH 15	2143	1064	CH 15	16213
488	REFLECTOR 1 POSITION 15	1963	1066	REFLECTOR 2 POSITION 15	16297
490	REFL 1 POS 15	2146	1068	REFL 2 POS 15	17413
492	REFL 2 POS 15	1963	1070	2ND LOOK	16781

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	16193	1072		16628
496	CH 3	16301	1074	CH 7	16390
498	CH 4	17419	1076	CH 8	16456
500	CH 5	16794	1078	CH 9	15974
502	CH 6	16649	1080	CH 10	17272
504	CH 7	16386	1082	CH 11	17041
506	CH 8	16474	1084	CH 12	19816
508	CH 9	15978	1086	CH 13	17759
510	CH 10	17284	1088	CH 14	14867
512	CH 11	17043	1182	CH 15	10416
514	CH 12	19827	1184	REFLECTOR 1 WARM CAL POS	10232
516	CH 13	17768	1186	REFLECTOR 2 WARM CAL POS	10416
518	CH 14	14877	1188	REFL 1 WARM CAL 2ND LOOK	10232
520	CH 15	2293	1190	REFL 2 WARM CAL 2ND LOOK	16177
522	REFLECTOR 1 POSITION 16	2113	1192	WARM CAL DATA 1	16288
524	REFLECTOR 2 POSITION 16	2298	1194		17408
526	REFL 1 POS 16 2ND LOOK	2115	1196		16777
528	REFL 2 POS 16 2ND LOOK	16225	1198		16625
530	SCENE DATA BP 16	16315	1200		16382
532	CH 3	17424	1202		16453
534	CH 4	16791	1204		15966
536	CH 5	16644	1206		17273
538	CH 6	16393	1208		17028
540	CH 7	16465	1210		19826
542	CH 8	15975	1212		17767
544	CH 9	17286	1214		14866
546	CH 10	17041	1216		16183
548	CH 11	19835	1218		16292
550	CH 12	17758	1220		17410
552	CH 13	14873	1222		16780
554	CH 14	2444	1224		16623
556	CH 15	2263	1226		16383
558	REFLECTOR 1 POSITION 17	2450	1228		16452
560	REFLECTOR 2 POSITION 17	2265	1230		15970
562	REFL 1 POS 17 2ND LOOK	16180	1232		17279
564	REFL 2 POS 17 2ND LOOK	16296	1234		17043
566	SCENE DATA BP 17	17424	1236		19830
568	CH 3	16796	1238		17764
570	CH 4	16636	1240		14867
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	REFLECTOR 1 POSITION 17				
	REFLECTOR 2 POSITION 17				
	REFL 1 POS 17 2ND LOOK				
	REFL 2 POS 17 2ND LOOK				
	SCENE DATA BP 17				
	CH 3				
	CH 4				
	CH 5				

1112 L.O.A' OSCILLATOR CHANNEL 8
1114 I SCILLATOR CHANNEL 15
1116 P #2 CHANNELS 9 THROUGH 14
1118 PLL LO #1 CHANNELS 9 THROUGH 14
1120 SPARE (NOT USED)
1122 MIXER/IF AMPLIFIER CHANNEL 3
1124 MIXER/IF AMPLIFIER CHANNEL 4
1126 MIXER/IF AMPLIFIER CHANNEL 5
1128 MIXER/IF AMPLIFIER CHANNEL 6
1130 MIXER/IF AMPLIFIER CHANNEL 7
1132 MIXER/IF AMPLIFIER CHANNEL 8
1134 MIXER/IF AMPLIFIER CH 9 THRU 14
1136 MIXER/IF AMPLIFIER CHANNEL 15
1138 IF AMPLIFIER CHANNEL 11 THRU 14
1140 IF AMPLIFIER CHANNEL 9
1142 IF AMPLIFIER CHANNEL 10
1144 IF AMPLIFIER CHANNEL 11
1146 DC/DC CONVERTER
1148 IF AMPLIFIER CHANNEL 13
1150 IF AMPLIFIER CHANNEL 14
1152 IF AMPLIFIER CHANNEL 12
1154 RF SHELF A1-1
1156 RF SHELF A1-2
1158 DETECTOR/PREAMPLIFIER ASSEMBLY
1160 A1-1 WARM LOAD 1
1162 A1-1 WARM LOAD 2
1164 A1-1 WARM LOAD 3
1166 A1-1 WARM LOAD 4
1168 A1-1 WARM LOAD CENTER
1170 A1-2 WARM LOAD 1
1172 A1-2 WARM LOAD 2
1174 A1-2 WARM LOAD 3
1176 A1-2 WARM LOAD 4
1178 A1-2 WARM LOAD CENTER
1180 TEMP SENSOR REFERENCE VOLTAGE

20234
21233
19935
21831
32767
21259
21222
20872
20228
21022
20271
20822
20687
20704
20862
20064
20811
20088
20196
19983
19738
20391
19075
23589
23342
23575
23510
23593
23852
24006
24167
23939
23830
25321

28.31
26.28
29.88
51.27
27.91
28.04
27.75
26.86
27.12
27.98
26.46
28.47
27.81
27.89
27.90
26.67
26.60
28.00
26.69
27.00
26.60
26.99
27.40
25.10
23.51
23.44
23.53
23.48
23.61
24.43
24.37
24.49
24.51
24.40

L.O. VOLTAGE (CHANNEL 6)
L.O. VOLTAGE (CHANNEL 3)
L.O. VOLTAGE (CHANNEL 4)
L.O. VOLTAGE (CHANNEL 5)
PLLO # 2 LOCK DETECT
PLLO # 1 LOCK DETECT
L.O. VOLTAGE (CHANNEL 15)

172 9.84
171 9.78
172 9.84
171 9.78
1 0.02
220 4.40
170 14.67

172 9.84
171 9.78
172 9.84
171 9.78
1 0.02
220 4.40
170 14.67

172 9.84
171 9.78
172 9.84
171 9.78
1 0.02
219 4.38
170 14.67

VDC
VDC
VDC
VDC
VDC
VDC

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

AMSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 11:36:55 SCAN NUMBER 1037
 [5] DIGITAL A DATA ELEMENT 0000
 [6] DIGITAL B DATA ELEMENT 00
 [7] ANALOG DATA ELEMENT 00

COMMANDS
 [9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
 [10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
 [11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
 [12] SCANNER A1 - 1 POWER = ON PLL POWER = PLLO # 1 [18]
 [13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
 [14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]

POWER [4] ON
 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
 SELECT TOUCHSCREEN BUTTON 3

ATB Low FREQ TRANSIENTS

3.2.4.2.3.3.2

POST-INJECTION

9/0: 748613 OA: 0810 1ST CPT
 P/N: 1331720-3-II SN: 107

TDS 51

(139/T)

TEST ENG: (7A) Date: 11/20/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	11111111	572	SCENE DATA	16373
2	SYNC SEQUENCE	11111111	574	BP	16452
3	SYNC SEQUENCE	11111111	576		15983
4	UNIT ID AND SERIAL NO	00100001	578		17266
5	DIGITAL B DATA	00000010	580		17025
6	DIGITAL B DATA	00001110	582		19801
7	DIGITAL B DATA	00000000	584		17769
8	DIGITAL B DATA	00000000	586		14848
9	REFLECTOR 1 POSITION	16225	588	REFLECTOR 1 POSITION	2598
10	REFLECTOR 2 POSITION	16225	590	REFLECTOR 2 POSITION	2417
11	REFL 1 POS	16225	592	REFL 1 POS	2601
12	REFL 2 POS	16184	594	REFL 2 POS	2419
13	SCENE DATA	16269	596	SCENE DATA	16175
14	BP	17393	598	BP	16265
15		17393	600		17400
16		16606	602		16774
17		16377	604		16625
18		16435	606		16380
19		15955	608		16442
20		17015	610		15955
21		17255	612		17265
22		17015	614		17012
23		19789	616		19803
24		17721	618		17744
25		14840	620		14850
26		168	622		2747
27		16373	624		2567
28		174	626		2753
29		16375	628		2571
30		16189	630		16165
31		16258	632		16253
32		17389	634		17379
33		16755	636		16608
34		16605	638		16357
35		16433	640		16436
36		15952	642		15948
37		17253	644		17249
38		17028	646		17008
39		19803	648		19801
40		17743	650		17727
41		14839	652		14839
42		323	654		2899
43		142	656		2717
44		326	658		2905
45		147	660		2722
46		16160	662		16164
47		16256	664		16254
48		17386	666		16253
49		16758	668		16759
50			670		
51	REFLECTOR 1 POSITION				
52	REFLECTOR 2 POSITION				
53	REFL 1 POS				
54	REFL 2 POS				
55	SCENE DATA				
56	BP				
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ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16612	672	CH 7	16605
96	CH 8	16358	674	CH 8	16358
98	CH 9	16436	676	CH 9	16433
100	CH 10	15961	678	CH 10	15952
102	CH 11	17253	680	CH 11	17253
104	CH 12	17009	682	CH 12	17010
106	CH 13	19785	684	CH 13	19799
108	CH 14	17732	686	CH 14	17744
110	CH 15	14842	688	CH 15	14839
112	REFLECTOR 1 POSITION	473	690	REFLECTOR 1 POSITION	3052
114	REFLECTOR 2 POSITION	295	692	REFLECTOR 2 POSITION	2869
116	REFL 1 POS	478	694	REFL 1 POS	3056
118	REFL 2 POS	299	696	REFL 2 POS	2874
120	SCENE DATA	16161	698	SCENE DATA	16163
122	CH 4	16251	700	CH 4	16255
124	CH 5	17379	702	CH 5	17374
126	CH 6	16771	704	CH 6	16755
128	CH 7	16614	706	CH 7	16608
130	CH 8	16362	708	CH 8	16360
132	CH 9	16442	710	CH 9	16436
134	CH 10	15964	712	CH 10	15951
136	CH 11	17260	714	CH 11	17242
138	CH 12	17012	716	CH 12	17007
140	CH 13	19814	718	CH 13	19800
142	CH 14	17723	720	CH 14	17733
144	CH 15	14844	722	CH 15	14839
146	REFLECTOR 1 POSITION	625	724	REFLECTOR 1 POSITION	3202
148	REFLECTOR 2 POSITION	446	726	REFLECTOR 2 POSITION	3022
150	REFL 1 POS	632	728	REFL 1 POS	3026
152	REFL 2 POS	449	730	REFL 2 POS	3027
154	SCENE DATA	16160	732	SCENE DATA	16164
156	CH 3	16256	734	CH 3	16251
158	CH 4	17379	736	CH 4	17379
160	CH 5	16770	738	CH 5	16755
162	CH 6	16618	740	CH 6	16605
164	CH 7	16360	742	CH 7	16361
166	CH 8	16444	744	CH 8	16432
168	CH 9	15973	746	CH 9	15953
170	CH 10	17248	748	CH 10	17248
172	CH 11	17025	750	CH 11	17014
174	CH 12	19801	752	CH 12	19794
176	CH 13	17765	754	CH 13	17753
178	CH 14	14846	756	CH 14	14839
180	REFLECTOR 1 POSITION	777	758	REFLECTOR 1 POSITION	3349
182	REFLECTOR 2 POSITION	596	760	REFLECTOR 2 POSITION	3172
184	REFL 1 POS	782	762	REFL 1 POS	3356
186	REFL 2 POS	598	764	REFL 2 POS	3177
188	SCENE DATA	16162	766	SCENE DATA	16164
190	CH 3	16259	768	CH 3	16255
192	CH 4	17379	770	CH 4	17382
	CH 5			CH 5	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16775	772	REFLECTOR 1 POSITION 24	3503
196	CH 7	16620	774	REFLECTOR 2 POSITION 24	3324
198	CH 8	16359	776	REFL 1 POS 24	3508
200	CH 9	16447	778	REFL 2 POS 24	3329
202	CH 10	15955	780	SCENE DATA BP 24	16161
204	CH 11	17259	782	CH 3	16225
206	CH 12	17021	784	CH 4	17379
208	CH 13	19819	786	CH 5	16754
210	CH 14	17750	788	CH 6	16604
212	CH 15	14850	790	CH 7	16353
214	REFLECTOR 1 POSITION 7	928	792	CH 8	16436
216	REFLECTOR 2 POSITION 7	748	794	CH 9	15953
218	REFL 1 POS 7	933	796	CH 10	17247
220	REFL 2 POS 7	749	798	CH 11	17010
222	SCENE DATA BP 7	16175	800	CH 12	19805
224	CH 3	16252	802	CH 13	17714
226	CH 4	17379	804	CH 14	14839
228	CH 5	16756	806	CH 15	3652
230	CH 6	16607	808	REFLECTOR 1 POSITION 25	3475
232	CH 7	16358	810	REFLECTOR 2 POSITION 25	3659
234	CH 8	16433	812	REFL 1 POS 25	3480
236	CH 9	15950	814	REFL 2 POS 25	16157
238	CH 10	17256	816	SCENE DATA BP 25	16253
240	CH 11	17016	818	CH 3	17381
242	CH 12	19802	820	CH 4	16607
244	CH 13	17727	822	CH 5	16362
246	CH 14	14840	824	CH 6	16432
248	CH 15	1080	826	CH 7	15955
250	REFLECTOR 1 POSITION 8	1088	828	CH 8	17248
252	REFLECTOR 2 POSITION 8	1084	830	CH 9	17007
254	REFL 1 POS 8	903	832	CH 10	19797
256	REFL 2 POS 8	16157	834	CH 11	17722
258	SCENE DATA BP 8	16254	836	CH 12	14839
260	CH 3	17379	838	CH 13	3652
262	CH 4	16759	840	CH 14	3475
264	CH 5	16608	842	CH 15	3659
266	CH 6	16356	844	REFLECTOR 1 POSITION 26	3480
268	CH 7	16434	846	REFLECTOR 2 POSITION 26	16157
270	CH 8	15958	848	REFL 1 POS 26	17381
272	CH 9	17249	850	REFL 2 POS 26	16607
274	CH 10	17014	852	SCENE DATA BP 26	16362
276	CH 11	19817	854	CH 3	16432
278	CH 12	17746	856	CH 4	15955
280	CH 13	14841	858	CH 5	17248
282	CH 14	12323	860	CH 6	17007
284	CH 15	10533	862	CH 7	19797
286	REFLECTOR 1 POSITION 9	12336	864	CH 8	17722
288	REFLECTOR 2 POSITION 9	1054	866	CH 9	14839
290	REFL 1 POS 9	16162	868	CH 10	3804
292	REFL 2 POS 9	16260	870	CH 11	3627
	SCENE DATA BP 9			CH 12	3812
	CH 3			CH 13	3633
	CH 4			CH 14	16179
	CH 5			CH 15	16258

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17384	872	CH 5	17382
296	CH 6	16759	874	CH 6	16752
298	CH 7	16606	876	CH 7	16609
300	CH 8	16362	878	CH 8	16365
302	CH 9	16433	880	CH 9	16434
304	CH 10	15952	882	CH 10	15950
306	CH 11	17255	884	CH 11	17253
308	CH 12	17020	886	CH 12	17012
310	CH 13	19805	888	CH 13	19795
312	CH 14	17742	890	CH 14	17735
314	CH 15	14841	892	CH 15	14839
316	REFLECTOR 1 POSITION 10	1384	894	REFLECTOR 1 POSITION 27	3970
318	REFLECTOR 2 POSITION 10	1203	896	REFLECTOR 2 POSITION 27	3782
320	REFL 1 POS 10 2ND LOOK	1388	898	REFL 1 POS 27 2ND LOOK	3971
322	REFL 2 POS 10 2ND LOOK	1205	900	REFL 2 POS 27 2ND LOOK	3785
324	SCENE DATA BP 10	16173	902	SCENE DATA BP 27	16156
326	CH 3	16256	904	CH 3	16261
328	CH 4	17384	906	CH 4	17387
330	CH 5	16755	908	CH 5	16755
332	CH 6	16610	910	CH 6	16610
334	CH 7	16361	912	CH 7	16367
336	CH 8	16432	914	CH 8	16434
338	CH 9	15952	916	CH 9	15953
340	CH 10	17256	918	CH 10	17251
342	CH 11	17015	920	CH 11	17014
344	CH 12	19801	922	CH 12	19789
346	CH 13	17745	924	CH 13	17735
348	CH 14	14840	926	CH 14	14839
350	CH 15	1534	928	CH 15	4111
352	REFLECTOR 1 POSITION 11	1356	930	REFLECTOR 1 POSITION 28	3936
354	REFLECTOR 2 POSITION 11	1540	932	REFLECTOR 2 POSITION 28	4114
356	REFL 1 POS 11 2ND LOOK	1356	934	REFL 1 POS 28 2ND LOOK	3936
358	REFL 2 POS 11 2ND LOOK	16150	936	REFL 2 POS 28 2ND LOOK	16141
360	SCENE DATA BP 11	16252	938	SCENE DATA BP 28	16261
362	CH 3	17382	940	CH 3	17386
364	CH 4	16761	942	CH 4	16756
366	CH 5	16607	944	CH 5	16609
368	CH 6	16360	946	CH 6	16362
370	CH 7	16436	948	CH 7	16431
372	CH 8	15954	950	CH 8	15949
374	CH 9	17257	952	CH 9	17251
376	CH 10	17008	954	CH 10	17016
378	CH 11	19796	956	CH 11	19790
380	CH 12	17755	958	CH 12	17721
382	CH 13	14839	960	CH 13	14839
384	CH 14	1687	962	CH 14	4259
386	CH 15	1508	964	CH 15	4084
388	REFLECTOR 1 POSITION 12	1691	966	REFLECTOR 1 POSITION 29	4267
390	REFLECTOR 2 POSITION 12	1509	968	REFLECTOR 2 POSITION 29	4087
392	REFL 1 POS 12 2ND LOOK	16182	970	REFL 1 POS 29 2ND LOOK	16114
	REFL 2 POS 12 2ND LOOK			REFL 2 POS 29 2ND LOOK	
	SCENE DATA BP 12			SCENE DATA BP 29	
	CH 3			CH 3	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16259	972	REFLECTOR 1 POSITION 30	16282
396	CH 5	17379	974	REFLECTOR 2 POSITION 30	17413
398	CH 6	16756	976	REFL 1 POS 30 2ND LOOK	16757
400	CH 7	16608	978	REFL 2 POS 30 2ND LOOK	16606
402	CH 8	16361	980	SCENE DATA BP 30	16400
404	CH 9	16437	982		16429
406	CH 10	15956	984		15948
408	CH 11	17259	986		17247
410	CH 12	17011	988		17013
412	CH 13	19795	990		19806
414	CH 14	17735	992		17736
416	CH 15	14840	994		14838
418	REFLECTOR 1 POSITION 13	1839	996		4419
420	REFLECTOR 2 POSITION 13	1657	998		4235
422	REFL 1 POS 13 2ND LOOK	1843	1000		4422
424	REFL 2 POS 13 2ND LOOK	1660	1002		4240
426	SCENE DATA BP 13	16152	1004		16193
428	CH 4	16261	1006		16270
430	CH 5	17391	1008		17391
432	CH 6	16772	1010		16755
434	CH 7	16625	1012		16610
436	CH 8	16370	1014		16366
438	CH 9	16453	1016		16432
440	CH 10	15955	1018		15952
442	CH 11	17275	1020		17247
444	CH 12	17031	1022		17003
446	CH 13	19819	1024		19791
448	CH 14	17748	1026		17737
450	CH 15	14849	1028		14838
452	REFLECTOR 1 POSITION 14	1989	1030	REFLECTOR 1 COLD CAL POS	6016
454	REFLECTOR 2 POSITION 14	1809	1032	REFLECTOR 2 COLD CAL POS	5833
456	REFL 1 POS 14 2ND LOOK	1994	1034	REFL 1 COLD CAL 2ND LOOK	6016
458	REFL 2 POS 14 2ND LOOK	1812	1036	REFL 2 COLD CAL 2ND LOOK	5833
460	SCENE DATA BP 14	16150	1038	COLD CAL DATA 1	16203
462	CH 4	16258	1040	CH 3	16262
464	CH 5	17391	1042	CH 4	17383
466	CH 6	16767	1044	CH 5	16754
468	CH 7	16622	1046	CH 6	16608
470	CH 8	16357	1048	CH 7	16373
472	CH 9	16446	1050	CH 8	16434
474	CH 10	15974	1052	CH 9	15953
476	CH 11	17259	1054	CH 10	17249
478	CH 12	17027	1056	CH 11	17007
480	CH 13	19816	1058	CH 12	19798
482	CH 14	17743	1060	CH 13	17727
484	CH 15	14848	1062	CH 14	14838
486	REFLECTOR 1 POSITION 15	2143	1064	CH 15	16209
488	REFLECTOR 2 POSITION 15	1963	1066	CH 3	16261
490	REFL 1 POS 15 2ND LOOK	2146	1068	CH 4	17386
492	REFL 2 POS 15 2ND LOOK	1963	1070	CH 5	16756

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	CH 3	1072		CH 7
496		CH 4	1074		CH 8
498		CH 5	1076		CH 9
500		CH 6	1078		CH 10
502		CH 7	1080		CH 11
504		CH 8	1082		CH 12
506		CH 9	1084		CH 13
508		CH 10	1086		CH 14
510		CH 11	1088		CH 15
512		CH 12	1182	REFLECTOR 1 WARM CAL POS	14839
514		CH 13	1184	REFLECTOR 2 WARM CAL POS	10416
516		CH 14	1186	REFL 1 WARM CAL 2ND LOOK	10232
518		CH 15	1188	REFL 2 WARM CAL 2ND LOOK	10416
520	REFLECTOR 1 POSITION 16	CH 16	1190	WARM CAL DATA 1	16171
522	REFLECTOR 2 POSITION 16	CH 16	1192		16254
524	REFL 1 POS 16	LOOK 16	1194		17387
526	REFL 2 POS 16	LOOK 16	1196		16750
528	SCENE DATA BP 16	CH 16	1198		16605
530		CH 3	1200		16362
532		CH 4	1202		16432
534		CH 5	1204		15954
536		CH 6	1206		17250
538		CH 7	1208		17005
540		CH 8	1210		17732
542		CH 9	1212		14838
544		CH 10	1214		16166
546		CH 11	1216		16258
548		CH 12	1218		17386
550		CH 13	1220		16754
552		CH 14	1222		16601
554		CH 15	1224		16363
556	REFLECTOR 1 POSITION 17	CH 17	1226		16436
558	REFLECTOR 2 POSITION 17	CH 17	1228		15951
560	REFL 1 POS 17	LOOK 17	1230		17244
562	REFL 2 POS 17	LOOK 17	1232		17003
564	SCENE DATA BP 17	CH 17	1234		19779
566		CH 3	1236		17731
568		CH 4	1238		14838
570		CH 5	1240		

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE DEG C
1090	SCAN MOTOR A1-1	17888	23.36
1092	SCAN MOTOR A1-2	18645	23.61
1094	FEEDHORN A1-1	19034	24.97
1096	FEEDHORN A1-2	19499	25.89
1098	RF MUX A1-1	20178	26.70
1100	RF MUX A1-2	20727	27.77
1102	LOCAL OSCILLATOR CHANNEL 3	21768	29.69
1104	LOCAL OSCILLATOR CHANNEL 4	21756	29.35
1106	LOCAL OSCILLATOR CHANNEL 5	21424	29.24
1108	LOCAL OSCILLATOR CHANNEL 6	20140	26.99
1110	LOCAL OSCILLATOR CHANNEL 7	20608	27.67
1112	LOCAL OSCILLATOR CHANNEL 8	20863	29.07
1114	LOCAL OSCILLATOR CHANNEL 15	21544	28.91
1116	PLL LO #2 CHANNELS 9 THROUGH 14	19953	26.31
1118	PLL LO #1 CHANNELS 9 THROUGH 14	22426	31.02
1120	SPARE (NOT USED)	32767	51.27
1122	MIXER/IF AMPLIFIER CHANNEL 3	21405	28.18
1124	MIXER/IF AMPLIFIER CHANNEL 4	21394	28.36
1126	MIXER/IF AMPLIFIER CHANNEL 5	21043	28.08
1128	MIXER/IF AMPLIFIER CHANNEL 6	20375	27.16
1130	MIXER/IF AMPLIFIER CHANNEL 7	20395	27.44
1132	MIXER/IF AMPLIFIER CHANNEL 8	21215	28.35
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20373	26.66
1136	MIXER/IF AMPLIFIER CHANNEL 15	21077	28.96
1138	IF AMPLIFIER CHANNEL 11 THRU 14	20983	28.37
1140	IF AMPLIFIER CHANNEL 9	21001	28.46
1142	IF AMPLIFIER CHANNEL 10	21162	28.47
1144	IF AMPLIFIER CHANNEL 11	20182	26.99
1146	DC/DC CONVERTER	21337	28.99
1148	IF AMPLIFIER CHANNEL 13	20204	26.91
1150	IF AMPLIFIER CHANNEL 14	20311	27.21
1152	IF AMPLIFIER CHANNEL 12	20099	26.82
1154	RF SHELF A1-1	19989	27.47
1156	RF SHELF A1-2	20579	27.76
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	19158	25.26
1160	A1-1 WARM LOAD 1	23597	23.52
1162	A1-1 WARM LOAD 2	23349	23.46
1164	A1-1 WARM LOAD 3	23583	23.54
1166	A1-1 WARM LOAD 4	23512	23.48
1168	A1-1 WARM LOAD CENTER	23600	23.63
1170	A1-2 WARM LOAD 1	23844	24.41
1172	A1-2 WARM LOAD 2	23999	24.36
1174	A1-2 WARM LOAD 3	24155	24.47
1176	A1-2 WARM LOAD 4	23942	24.51
1178	A1-2 WARM LOAD CENTER	23822	24.39
1180	TEMP SENSOR REFERENCE VOLTAGE	25322	

DESCRIPTION

STATUS

STATUS

DESCRIPTION	STATUS	STATUS
SCANNER A1-1 POWER	ON	ON
SCANNER A1-2 POWER	ON	ON
PLL POWER	ON	ON
ANTENNA IN WARM CAL POSITION MODE	PLLO # 1	PLLO # 1
ANTENNA IN COLD CAL POSITION MODE	NO	NO
ANTENNA IN NADIR POSITION MODE	NO	NO
ANTENNA IN FULL SCAN MODE	YES	YES
SURVIVAL HEATER POWER	OFF	OFF
MODULE POWER	CONNECT	CONNECT
COLD CAL POSITION MSB	ZERO	ZERO
COLD CAL POSITION LSB	ZERO	ZERO

ANALOG DATA

DESCRIPTION	VALUE	DEG C	VALUE	DEG C	VALUE	DEG C
A1-1 SCANNER MOTOR TEMPERATURE	214	18.0	214	18.0	214	18.0
A1-2 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4	215	19.4
A1-1 RF SHELF TEMPERATURE	217	19.4	217	20.7	217	20.7
A1-2 RF SHELF TEMPERATURE	214	22.1	214	22.1	214	22.1
A1-1 WARM LOAD TEMPERATURE	215	18.0	215	18.0	215	18.0
A1-2 WARM LOAD TEMPERATURE	215	19.4	215	19.4	215	19.4

DESCRIPTION

VALUE

DESCRIPTION	VALUE	AMPS/VOLTS	VALUE	AMPS/VOLTS	VALUE	AMPS/VOLTS
A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	87	40.54	87	40.54	87	40.54
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	84	39.14	84	39.14	84	39.14
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	169	14.58	169	14.58	169	14.58
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	147	-15.20	147	-15.20	147	-15.20
RECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	145	4.83	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	144	4.80	144	4.80	144	4.80
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76	169	9.76
PHASE LOCK LOOP (CHANNEL 9/14) +15 VDC	169	14.58	169	14.58	169	14.58
PHASE LOCK LOOP (CHANNEL 9/14) -15 VDC	145	-15.30	145	-15.30	145	-15.30
L.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 3)	171	9.78	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78	171	9.78
PLLO # 2 LOCK DETECT	1	0.02	1	0.02	1	0.02
PLLO # 1 LOCK DETECT	219	4.38	219	4.38	219	4.38
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

AMSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 11:44:49 SCAN NUMBER 1077
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

COMMANDS
[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL0 # 1 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]
POWER [4] ON
SELECT TOUCHSCREEN BUTTON 3 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

ATB HIGH FREQ TRANSDUCERS 1.43 Hz

3.2.4.2.3.3.2

PRE-INJECTION

90: 748613 OA: 0810 1ST CPT
PN: 1331720-3-II SN: 109

TDs 51

$\frac{139}{T}$ $\frac{100}{T}$

TEST ENG: Am: 11/20/99

FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	1	572	SCENE DATA	16375
2	SYNC SEQUENCE	2	574	BP	16450
3	SYNC SEQUENCE	3	576		15986
4	UNIT ID AND SERIAL NO	00100001	578		17211
5	DIGITAL B DATA	00000010	580		16991
6	DIGITAL B DATA	00001110	582		19770
7	DIGITAL B DATA	00000000	584		17682
8	DIGITAL B DATA	00000000	586		14858
10	REFLECTOR 1 POSITION	23	588	REFLECTOR 1 POSITION	2598
12	REFLECTOR 2 POSITION	16225	590	REFLECTOR 2 POSITION	2416
14	REFL 1 POS	24	592	REFL 1 POS	2601
16	REFL 2 POS	16225	594	REFL 2 POS	2419
18	SCENE DATA	16193	596	SCENE DATA	16184
20		16268	598		16268
22		17391	600		17399
24		16607	602		16778
26		16376	604		16626
28		16434	606		16377
30		15949	608		16442
32		17191	610		15958
34		16969	612		17204
36		19760	614		16981
38		17643	616		19761
40		14850	618		17646
42		167	620		14860
44	REFLECTOR 1 POSITION	16373	622	REFLECTOR 1 POSITION	2748
46	REFLECTOR 2 POSITION	16373	624	REFLECTOR 2 POSITION	2568
48	REFL 1 POS	173	626	REFL 1 POS	2753
50	REFL 2 POS	16375	628	REFL 2 POS	2571
52	SCENE DATA	16202	630	SCENE DATA	16174
54		16260	632		16255
56		17386	634		17382
58		16762	636		16763
60		16603	638		16609
62		16364	640		16353
64		16437	642		16433
66		15953	644		15953
68		17187	646		15953
70		16968	648		17195
72		19760	650		16974
74		17658	652		17658
76		14850	654		14850
78	REFLECTOR 1 POSITION	324	656	REFLECTOR 1 POSITION	2899
80	REFLECTOR 2 POSITION	143	658	REFLECTOR 2 POSITION	2717
82	REFL 1 POS	326	660	REFL 1 POS	2905
84	REFL 2 POS	148	662	REFL 2 POS	2722
86	SCENE DATA	16173	664	SCENE DATA	16176
88		16255	666		16256
90		17379	668		17381
92		16765	670		16760

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16608	672	CH 7	16608
96	CH 8	16350	674	CH 8	16360
98	CH 9	16438	676	CH 9	16440
100	CH 10	15959	678	CH 10	15952
102	CH 11	17192	680	CH 11	17193
104	CH 12	16979	682	CH 12	16971
106	CH 13	19768	684	CH 13	19770
108	CH 14	17656	686	CH 14	17655
110	CH 15	14853	688	CH 15	14849
112	REFLECTOR 1 POSITION 4	474	690	REFLECTOR 1 POSITION 21	3052
114	REFLECTOR 2 POSITION 4	297	692	REFLECTOR 2 POSITION 21	2870
116	REFL 1 POS 4 2ND LOOK	478	694	REFL 1 POS 21 2ND LOOK	3057
118	REFL 2 POS 4 2ND LOOK	300	696	REFL 2 POS 21 2ND LOOK	2874
120	SCENE DATA BP 4	16171	698	SCENE DATA BP 21	16182
122	CH 3	16254	700	CH 3	16254
124	CH 4	17372	702	CH 4	17379
126	CH 5	16774	704	CH 5	16758
128	CH 6	16613	706	CH 6	16604
130	CH 7	16353	708	CH 7	16351
132	CH 8	16441	710	CH 8	16435
134	CH 9	15964	712	CH 9	15951
136	CH 10	17199	714	CH 10	17196
138	CH 11	16983	716	CH 11	16973
140	CH 12	19747	718	CH 12	19769
142	CH 13	17638	720	CH 13	17643
144	CH 14	14854	722	CH 14	14848
146	CH 15	625	724	CH 15	3202
148	REFLECTOR 1 POSITION 5	444	726	REFLECTOR 1 POSITION 22	3023
150	REFLECTOR 2 POSITION 5	632	728	REFLECTOR 2 POSITION 22	3206
152	REFL 1 POS 5 2ND LOOK	449	730	REFL 1 POS 22 2ND LOOK	3027
154	REFL 2 POS 5 2ND LOOK	16169	732	REFL 2 POS 22 2ND LOOK	16178
156	SCENE DATA BP 5	16253	734	SCENE DATA BP 22	16256
158	CH 3	17380	736	CH 3	17376
160	CH 4	16773	738	CH 4	16761
162	CH 5	16616	740	CH 5	16604
164	CH 6	16355	742	CH 6	16356
166	CH 7	16444	744	CH 7	16435
168	CH 8	15974	746	CH 8	15953
170	CH 9	17191	748	CH 9	17191
172	CH 10	16972	750	CH 10	16969
174	CH 11	19768	752	CH 11	19767
176	CH 12	17657	754	CH 12	17653
178	CH 13	14854	756	CH 13	14849
180	CH 14	778	758	CH 14	3351
182	REFLECTOR 1 POSITION 6	596	760	REFLECTOR 1 POSITION 23	3172
184	REFLECTOR 2 POSITION 6	782	762	REFLECTOR 2 POSITION 23	3357
186	REFL 1 POS 6 2ND LOOK	599	764	REFL 1 POS 23 2ND LOOK	3177
188	REFL 2 POS 6 2ND LOOK	16175	766	REFL 2 POS 23 2ND LOOK	16179
190	SCENE DATA BP 6	16254	768	SCENE DATA BP 23	16253
192	CH 3	17382	770	CH 3	17378
	CH 4			CH 4	
	CH 5			CH 5	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH	16774	772	REFLECTOR 1 POSITION	16761
196	CH	16620	774	REFLECTOR 2 POSITION	16608
198	CH	16356	776	REFL 1 POS	16352
200	CH	16448	778	REFL 2 POS	16435
202	CH	15954	780	SCENE DATA BP	15954
204	CH	17194	782	CH	17187
206	CH	16981	784	CH	16968
208	CH	19746	786	CH	19770
210	CH	17658	788	CH	17661
212	CH	14860	790	CH	14849
214	CH	929	792	REFLECTOR 1 POSITION	3504
216	CH	748	794	REFLECTOR 2 POSITION	3324
218	CH	934	796	REFL 1 POS	3509
220	CH	749	798	REFL 2 POS	3330
222	CH	16182	800	SCENE DATA BP	16175
224	CH	16255	802	CH	16252
226	CH	17377	804	CH	17384
228	CH	16764	806	CH	16760
230	CH	16608	808	CH	16606
232	CH	16355	810	CH	16351
234	CH	16439	812	CH	16435
236	CH	15951	814	CH	15955
238	CH	17193	816	CH	17189
240	CH	16972	818	CH	16970
242	CH	19756	820	CH	19758
244	CH	17638	822	CH	17644
246	CH	14851	824	CH	14849
248	CH	10799	826	REFLECTOR 1 POSITION	3652
250	CH	899	828	REFLECTOR 2 POSITION	3477
252	CH	1084	830	REFL 1 POS	3659
254	CH	903	832	REFL 2 POS	3481
256	CH	16166	834	SCENE DATA BP	16163
258	CH	16250	836	CH	16252
260	CH	17379	838	CH	17380
262	CH	16763	840	CH	16767
264	CH	16606	842	CH	16607
266	CH	16355	844	CH	16356
268	CH	16439	846	CH	16433
270	CH	15953	848	CH	15952
272	CH	17193	850	CH	17194
274	CH	16970	852	CH	16974
276	CH	19758	854	CH	19746
278	CH	17674	856	CH	17649
280	CH	14851	858	CH	14849
282	CH	12322	860	REFLECTOR 1 POSITION	3807
284	CH	1052	862	REFLECTOR 2 POSITION	3625
286	CH	1237	864	REFL 1 POS	3812
288	CH	1055	866	REFL 2 POS	3632
290	CH	16173	868	SCENE DATA BP	16194
292	CH	16259	870	CH	16257

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17381	CH 5	REFLECTOR 1 POSITION 27	17381
296	CH 6	16758	CH 6	REFLECTOR 2 POSITION 27	16758
298	CH 7	16606	CH 7	REFL 1 POS 27 2ND LOOK	16606
300	CH 8	16358	CH 8	REFL 2 POS 27 2ND LOOK	16358
302	CH 9	16435	CH 9	SCENE DATA BP 27	16435
304	CH 10	15957	CH 10	CH 3	15957
306	CH 11	17190	CH 11	CH 4	17190
308	CH 12	16976	CH 12	CH 5	16976
310	CH 13	19764	CH 13	CH 6	19764
312	CH 14	17654	CH 14	CH 7	17654
314	CH 15	14850	CH 15	CH 8	14850
316	REFLECTOR 1 POSITION 10	1384	CH 15	CH 9	1384
318	REFLECTOR 2 POSITION 10	1203	CH 15	CH 10	1203
320	REFL 1 POS 10 2ND LOOK	1389	CH 15	CH 11	1389
322	REFL 2 POS 10 2ND LOOK	1205	CH 15	CH 12	1205
324	SCENE DATA BP 10	16157	CH 15	CH 13	16157
326	CH 3	16257	CH 15	CH 14	16257
328	CH 4	17379	CH 15	CH 15	17379
330	CH 5	16761	CH 15	CH 15	16761
332	CH 6	16604	CH 15	CH 15	16604
334	CH 7	16352	CH 15	CH 15	16352
336	CH 8	16435	CH 15	CH 15	16435
338	CH 9	15953	CH 15	CH 15	15953
340	CH 10	17187	CH 15	CH 15	17187
342	CH 11	16968	CH 15	CH 15	16968
344	CH 12	19745	CH 15	CH 15	19745
346	CH 13	17650	CH 15	CH 15	17650
348	CH 14	14849	CH 15	CH 15	14849
350	REFLECTOR 1 POSITION 11	1534	CH 15	CH 15	1534
352	REFLECTOR 2 POSITION 11	1356	CH 15	CH 15	1356
354	REFL 1 POS 11 2ND LOOK	1540	CH 15	CH 15	1540
356	REFL 2 POS 11 2ND LOOK	1357	CH 15	CH 15	1357
358	SCENE DATA BP 11	16157	CH 15	CH 15	16157
360	CH 3	16257	CH 15	CH 15	16257
362	CH 4	17383	CH 15	CH 15	17383
364	CH 5	16762	CH 15	CH 15	16762
366	CH 6	16604	CH 15	CH 15	16604
368	CH 7	16359	CH 15	CH 15	16359
370	CH 8	16433	CH 15	CH 15	16433
372	CH 9	15955	CH 15	CH 15	15955
374	CH 10	17195	CH 15	CH 15	17195
376	CH 11	16979	CH 15	CH 15	16979
378	CH 12	19755	CH 15	CH 15	19755
380	CH 13	17647	CH 15	CH 15	17647
382	CH 14	14851	CH 15	CH 15	14851
384	REFLECTOR 1 POSITION 12	1687	CH 15	CH 15	1687
386	REFLECTOR 2 POSITION 12	1507	CH 15	CH 15	1507
388	REFL 1 POS 12 2ND LOOK	1692	CH 15	CH 15	1692
390	REFL 2 POS 12 2ND LOOK	1509	CH 15	CH 15	1509
392	SCENE DATA BP 12	16191	CH 15	CH 15	16191
	CH 3		CH 15	CH 15	
	CH 4		CH 15	CH 15	
	CH 5		CH 15	CH 15	
	CH 6		CH 15	CH 15	
	CH 7		CH 15	CH 15	
	CH 8		CH 15	CH 15	
	CH 9		CH 15	CH 15	
	CH 10		CH 15	CH 15	
	CH 11		CH 15	CH 15	
	CH 12		CH 15	CH 15	
	CH 13		CH 15	CH 15	
	CH 14		CH 15	CH 15	
	CH 15		CH 15	CH 15	
	REFLECTOR 1 POSITION 29		CH 15	CH 15	
	REFLECTOR 2 POSITION 29		CH 15	CH 15	
	REFL 1 POS 29 2ND LOOK		CH 15	CH 15	
	REFL 2 POS 29 2ND LOOK		CH 15	CH 15	
	SCENE DATA BP 29		CH 15	CH 15	
	CH 3		CH 15	CH 15	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH	16257	972	CH	16282
396	CH	17379	974	CH	17412
398	CH	16763	976	CH	16759
400	CH	16605	978	CH	16606
402	CH	16358	980	CH	16399
404	CH	16436	982	CH	16431
406	CH	15955	984	CH	15951
408	CH	17191	986	CH	17190
410	CH	16971	988	CH	16975
412	CH	19744	990	CH	19756
414	CH	17653	992	CH	17661
416	CH	14849	994	CH	14848
418	REFLECTOR 1 POSITION 13	18339	996	REFLECTOR 1 POSITION 30	4419
420	REFLECTOR 2 POSITION 13	1658	998	REFLECTOR 2 POSITION 30	4235
422	REFL 1 POS 13	1843	1000	REFL 1 POS 30	4422
424	REFL 2 POS 13	1661	1002	REFL 2 POS 30	4240
426	SCENE DATA BP 13	16166	1004	SCENE DATA BP 30	16200
428	CH	16263	1006	CH	16274
430	CH	17388	1008	CH	17386
432	CH	16778	1010	CH	16759
434	CH	16620	1012	CH	16602
436	CH	16366	1014	CH	16365
438	CH	16454	1016	CH	16436
440	CH	15960	1018	CH	15954
442	CH	17205	1020	CH	17190
444	CH	16989	1022	CH	16974
446	CH	19763	1024	CH	19745
448	CH	17660	1026	CH	17634
450	CH	14859	1028	CH	14850
452	REFLECTOR 1 POSITION 14	1989	1030	REFLECTOR 1 COLD CAL POS	6017
454	REFLECTOR 2 POSITION 14	1809	1032	REFLECTOR 2 COLD CAL POS	5833
456	REFL 1 POS 14	1994	1034	REFL 1 COLD CAL 2ND LOOK	6017
458	REFL 2 POS 14	1812	1036	REFL 2 COLD CAL 2ND LOOK	5833
460	SCENE DATA BP 14	16161	1038	COLD CAL DATA 1	16217
462	CH	16261	1040	CH	16264
464	CH	17393	1042	CH	17385
466	CH	16772	1044	CH	16759
468	CH	16622	1046	CH	16604
470	CH	16349	1048	CH	16366
472	CH	16450	1050	CH	16438
474	CH	15977	1052	CH	15954
476	CH	17202	1054	CH	17195
478	CH	16979	1056	CH	16968
480	CH	19760	1058	CH	19760
482	CH	17660	1060	CH	17653
484	CH	14859	1062	CH	14848
486	REFLECTOR 1 POSITION 15	2143	1064	COLD CAL DATA 2	16212
488	REFLECTOR 2 POSITION 15	1963	1066	CH	16263
490	REFL 1 POS 15	2147	1068	CH	17384
492	REFL 2 POS 15	1964	1070	CH	16754

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE DEG C
1090	SCAN MOTOR A1-1	17894	23.37
1092	SCAN MOTOR A1-2	18649	23.62
1094	FEEDHORN A1-1	19115	25.13
1096	FEEDHORN A1-2	19629	26.13
1098	RF MUX A1-1	20284	26.90
1100	RF MUX A1-2	20879	28.06
1102	LOCAL OSCILLATOR CHANNEL 3	21757	29.67
1104	LOCAL OSCILLATOR CHANNEL 4	21729	29.30
1106	LOCAL OSCILLATOR CHANNEL 5	21403	29.20
1108	LOCAL OSCILLATOR CHANNEL 6	20052	26.82
1110	LOCAL OSCILLATOR CHANNEL 7	20617	27.68
1112	LOCAL OSCILLATOR CHANNEL 8	20871	29.08
1114	LOCAL OSCILLATOR CHANNEL 15	21582	28.98
1116	PLL LO #2 CHANNELS 9 THROUGH 14	20103	26.59
1118	PLL LO #1 CHANNELS 9 THROUGH 14	22336	30.85
1120	SPARE (NOT USED)	32767	51.27
1122	MIXER/IF AMPLIFIER CHANNEL 3	21534	28.43
1124	MIXER/IF AMPLIFIER CHANNEL 4	21537	28.64
1126	MIXER/IF AMPLIFIER CHANNEL 5	21184	28.34
1128	MIXER/IF AMPLIFIER CHANNEL 6	20447	27.29
1130	MIXER/IF AMPLIFIER CHANNEL 7	20497	27.63
1132	MIXER/IF AMPLIFIER CHANNEL 8	21351	28.61
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20485	26.87
1136	MIXER/IF AMPLIFIER CHANNEL 15	21058	28.92
1138	MIXER/IF AMPLIFIER CHANNEL 11 THRU 14	21093	28.58
1140	IF AMPLIFIER CHANNEL 9	21111	28.67
1142	IF AMPLIFIER CHANNEL 10	21271	28.67
1144	IF AMPLIFIER CHANNEL 11	20229	26.98
1146	DC/DC CONVERTER	21377	29.06
1148	IF AMPLIFIER CHANNEL 13	20250	27.00
1150	IF AMPLIFIER CHANNEL 14	20363	27.31
1152	IF AMPLIFIER CHANNEL 12	20149	26.92
1154	RF SHELF A1-1	20086	27.65
1156	RF SHELF A1-2	20709	28.01
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	19272	25.47
1160	A1-1 WARM LOAD 1	23602	23.53
1162	A1-1 WARM LOAD 2	23351	23.46
1164	A1-1 WARM LOAD 3	23586	23.55
1166	A1-1 WARM LOAD 4	23520	23.50
1168	A1-1 WARM LOAD CENTER	23604	23.63
1170	A1-2 WARM LOAD 1	23845	24.41
1172	A1-2 WARM LOAD 2	24001	24.36
1174	A1-2 WARM LOAD 3	24156	24.47
1176	A1-2 WARM LOAD 4	23932	24.49
1178	A1-2 WARM LOAD CENTER	23825	24.39
1180	TEMP SENSOR REFERENCE VOLTAGE	25321	

DESCRIPTION

STATUS

STATUS

STATUS

SCANNER A1-1 POWER	ON		ON
SCANNER A1-2 POWER	ON		ON
PLL POWER	PLLO # 1	PLLO # 1	PLLO # 1
ANTENNA IN WARM CAL POSITION MODE	NO	NO	NO
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO
ANTENNA IN NADIR POSITION MODE	NO	NO	NO
ANTENNA IN FULL SCAN MODE	YES	YES	YES
SURVIVAL HEATER POWER	OFF	OFF	OFF
MODULE POWER	CONNECT	CONNECT	CONNECT
COLD CAL POSITION MSB	ZERO	ZERO	ZERO
COLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA
DESCRIPTION

VALUE

DEG C

VALUE

DEG C

VALUE

DEG C

VALUE

DEG C

A1-1 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4
A1-2 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4
A1-1 RF SHELF TEMPERATURE	216	20.7	216	20.7
A1-2 RF SHELF TEMPERATURE	218	23.4	218	23.4
A1-1 WARM LOAD TEMPERATURE	215	19.4	215	19.4
A1-2 WARM LOAD TEMPERATURE	216	20.7	216	20.7

DESCRIPTION

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	89	41.47	89	41.47
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	86	40.08	86	40.08
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	171	14.84	171	14.76
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	149	-15.10	148	-15.15
RECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	146	4.87	146	4.87
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76
PHASE LOCK LOOP (CHANNEL 9/14) +15 VDC	169	14.58	169	14.58
PHASE LOCK LOOP (CHANNEL 9/14) -15 VDC	145	-15.30	145	-15.30
L.O. VOLTAGE {CHANNEL 8}	171	9.78	171	9.78
L.O. VOLTAGE {CHANNEL 7}	171	9.78	171	9.78
L.O. VOLTAGE {CHANNEL 6}	172	9.84	172	9.84
L.O. VOLTAGE {CHANNEL 3}	171	9.78	171	9.78
L.O. VOLTAGE {CHANNEL 4}	172	9.84	172	9.84
L.O. VOLTAGE {CHANNEL 5}	171	9.78	171	9.78
PLLO # 2 LOCK DETECT	2	0.04	2	0.04
PLLO # 1 LOCK DETECT	219	4.38	219	4.38
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67

AMSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 11:47:45 SCAN NUMBER 1099

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

COMMANDS

[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLLO # 1 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 3

ATB HIGH FREQ TRANSIENTS 1.43 Hz

3.2.4.2.3.3.2

POST - INJECTION

NO: 748613 OA: 0810
PN: 1331720-3-IT SN: 109

1ST CPT

TDS SI

139
T

TEST ENG:

DATE: 11/20/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE BYTE 1	11111111	572	SCENE DATA BP 17	CH 8
2	SYNC SEQUENCE BYTE 2	11111111	574		CH 9
3	SYNC SEQUENCE BYTE 3	11111111	576		CH 10
4	UNIT ID AND SERIAL NO	00100001	578		CH 11
5	DIGITAL B DATA BYTE 1	00000010	580		CH 12
6	DIGITAL B DATA BYTE 2	00001110	582		CH 13
7	DIGITAL B DATA BYTE 3	00000000	584		CH 14
8	DIGITAL B DATA BYTE 4	00000000	586		CH 15
10	REFLECTOR 1 POSITION	23	588	REFLECTOR 1 POSITION 18	2597
12	REFLECTOR 2 POSITION	16225	590	REFLECTOR 2 POSITION 18	2416
14	REFL 1 POS 1 2ND LOOK	23	592	REFL 1 POS 18 2ND LOOK	2601
16	REFL 2 POS 1 2ND LOOK	16224	594	REFL 2 POS 18 2ND LOOK	2419
18	SCENE DATA BP 1	16182	596	SCENE DATA BP 18	16173
20		16248	598		16242
22		17377	600		17383
24		16744	602		16765
26		16591	604		16613
28		16361	606		16369
30		16424	608		16431
32		15939	610		15942
34		17192	612		17214
36		16971	614		16978
38		19755	616		19759
40		17674	618		17669
42		14825	620		14835
44	REFLECTOR 1 POSITION	167	622	REFLECTOR 1 POSITION 19	2750
46	REFLECTOR 2 POSITION	16373	624	REFLECTOR 2 POSITION 19	2568
48	REFL 1 POS 2 2ND LOOK	174	626	REFL 1 POS 19 2ND LOOK	2753
50	REFL 2 POS 2 2ND LOOK	16375	628	REFL 2 POS 19 2ND LOOK	2571
52	SCENE DATA BP 2	16189	630	SCENE DATA BP 19	16159
54		16238	632		16235
56		17371	634		17362
58		16746	636		16749
60		16592	638		16594
62		16350	640		16339
64		16422	642		16423
66		15942	644		15939
68		17203	646		17199
70		16979	648		16971
72		19767	650		19765
74		17677	652		17687
76		14825	654		14827
78	REFLECTOR 1 POSITION	323	656	REFLECTOR 1 POSITION 20	2899
80	REFLECTOR 2 POSITION	143	658	REFLECTOR 2 POSITION 20	2718
82	REFL 1 POS 3 2ND LOOK	327	660	REFL 1 POS 20 2ND LOOK	2905
84	REFL 2 POS 3 2ND LOOK	148	662	REFL 2 POS 20 2ND LOOK	2722
86	SCENE DATA BP 3	16158	664	SCENE DATA BP 20	16162
88		16231	666		16231
90		17364	668		17362
92		16754	670		16751

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16595	672	CH 7	16596
96	CH 8	16342	674	CH 8	16344
98	CH 9	16421	676	CH 9	16421
100	CH 10	15943	678	CH 10	15942
102	CH 11	17202	680	CH 11	17208
104	CH 12	16975	682	CH 12	16980
106	CH 13	19747	684	CH 13	19764
108	CH 14	17684	686	CH 14	17672
110	CH 15	14828	688	CH 15	14826
112	REFLECTOR 1 POSITION 4	475	690	REFLECTOR 1 POSITION 21	3053
114	REFLECTOR 2 POSITION 4	296	692	REFLECTOR 2 POSITION 21	2868
116	REFL 1 POS 4	478	694	REFL 1 POS 21	3057
118	REFL 2 POS 4	300	696	REFL 2 POS 21	2874
120	SCENE DATA BP 4	16161	698	SCENE DATA BP 21	16163
122	CH 3	16231	700	CH 3	16234
124	CH 4	17361	702	CH 4	17363
126	CH 5	16763	704	CH 5	16747
128	CH 6	16597	706	CH 6	16591
130	CH 7	16346	708	CH 7	16341
132	CH 8	16429	710	CH 8	16421
134	CH 9	15950	712	CH 9	15942
136	CH 10	17216	714	CH 10	17201
138	CH 11	16967	716	CH 11	16974
140	CH 12	19750	718	CH 12	19759
142	CH 13	17647	720	CH 13	17682
144	CH 14	14831	722	CH 14	14826
146	CH 15	625	724	CH 15	3203
148	REFLECTOR 1 POSITION 5	445	726	REFLECTOR 1 POSITION 22	3021
150	REFLECTOR 2 POSITION 5	631	728	REFLECTOR 2 POSITION 22	3206
152	REFL 1 POS 5	448	730	REFL 1 POS 22	3026
154	REFL 2 POS 5	16155	732	REFL 2 POS 22	16160
156	SCENE DATA BP 5	16234	734	SCENE DATA BP 22	16233
158	CH 3	17361	736	CH 3	17365
160	CH 4	16755	738	CH 4	16751
162	CH 5	16603	740	CH 5	16595
164	CH 6	16341	742	CH 6	16347
166	CH 7	16430	744	CH 7	16421
168	CH 8	15956	746	CH 8	15937
170	CH 9	17200	748	CH 9	17201
172	CH 10	16973	750	CH 10	16966
174	CH 11	19770	752	CH 11	19753
176	CH 12	17679	754	CH 12	17664
178	CH 13	14832	756	CH 13	14826
180	CH 14	777	758	CH 14	3350
182	CH 15	595	760	CH 15	3171
184	REFLECTOR 1 POSITION 6	782	762	REFLECTOR 1 POSITION 23	3357
186	REFLECTOR 2 POSITION 6	598	764	REFLECTOR 2 POSITION 23	3178
188	REFL 1 POS 6	16163	766	REFL 1 POS 23	16166
190	REFL 2 POS 6	16231	768	REFL 2 POS 23	16230
192	SCENE DATA BP 6	17365	770	SCENE DATA BP 23	17361

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16762	772	CH 6	16743
196	CH 7	16606	774	CH 7	16596
198	CH 8	16343	776	CH 8	16345
200	CH 9	16437	778	CH 9	16419
202	CH 10	15946	780	CH 10	15937
204	CH 11	17212	782	CH 11	17202
206	CH 12	16985	784	CH 12	16971
208	CH 13	19760	786	CH 13	19754
210	CH 14	17659	788	CH 14	17675
212	CH 15	14836	790	CH 15	14826
214	REFLECTOR 1 POSITION 7	928	792	REFLECTOR 1 POSITION 24	3504
216	REFLECTOR 2 POSITION 7	749	794	REFLECTOR 2 POSITION 24	3324
218	REFL 1 POS 7 2ND LOOK	933	796	REFL 1 POS 24 2ND LOOK	3509
220	REFL 2 POS 7 2ND LOOK	749	798	REFL 2 POS 24 2ND LOOK	3330
222	SCENE DATA BP 7	16164	800	SCENE DATA BP 24	16157
224	CH 3	16234	802	CH 3	16233
226	CH 4	17359	804	CH 4	17362
228	CH 5	16746	806	CH 5	16749
230	CH 6	16593	808	CH 6	16593
232	CH 7	16341	810	CH 7	16340
234	CH 8	16421	812	CH 8	16421
236	CH 9	15934	814	CH 9	15945
238	CH 10	17204	816	CH 10	17201
240	CH 11	16974	818	CH 11	16978
242	CH 12	19743	820	CH 12	19769
244	CH 13	17664	822	CH 13	17678
246	CH 14	14827	824	CH 14	14828
248	CH 15	1079	826	CH 15	3653
250	REFLECTOR 1 POSITION 8	900	828	REFLECTOR 1 POSITION 25	3476
252	REFLECTOR 2 POSITION 8	1085	830	REFLECTOR 2 POSITION 25	3659
254	REFL 1 POS 8 2ND LOOK	903	832	REFL 1 POS 25 2ND LOOK	3481
256	REFL 2 POS 8 2ND LOOK	16152	834	REFL 2 POS 25 2ND LOOK	16155
258	SCENE DATA BP 8	16234	836	SCENE DATA BP 25	16230
260	CH 3	17365	838	CH 3	17367
262	CH 4	16749	840	CH 4	16745
264	CH 5	16594	842	CH 5	16593
266	CH 6	16341	844	CH 6	16342
268	CH 7	15938	846	CH 7	16418
270	CH 8	17208	848	CH 8	15942
272	CH 9	16974	850	CH 9	17201
274	CH 10	19753	852	CH 10	16981
276	CH 11	17689	854	CH 11	19764
278	CH 12	14828	856	CH 12	17695
280	CH 13	1233	858	CH 13	14825
282	CH 14	1052	860	CH 14	3805
284	CH 15	1236	862	CH 15	3626
286	REFLECTOR 1 POSITION 9	1054	864	REFLECTOR 1 POSITION 26	3811
288	REFLECTOR 2 POSITION 9	16159	866	REFLECTOR 2 POSITION 26	3632
290	REFL 1 POS 9 2ND LOOK	16236	868	REFL 1 POS 26 2ND LOOK	16178
292	REFL 2 POS 9 2ND LOOK	16236	870	REFL 2 POS 26 2ND LOOK	16237
	SCENE DATA BP 9			SCENE DATA BP 26	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17369	872	CH 5	17366
296	CH 6	16750	874	CH 6	16747
298	CH 7	16595	876	CH 7	16594
300	CH 8	16347	878	CH 8	16343
302	CH 9	16422	880	CH 9	16424
304	CH 10	15943	882	CH 10	15937
306	CH 11	17206	884	CH 11	17200
308	CH 12	16976	886	CH 12	16972
310	CH 13	19755	888	CH 13	19749
312	CH 14	17679	890	CH 14	17678
314	CH 15	14826	892	CH 15	14825
316	REFLECTOR 1 POSITION 10	1385	894	REFLECTOR 1 POSITION 27	3970
318	REFLECTOR 2 POSITION 10	1203	896	REFLECTOR 2 POSITION 27	3780
320	REFL 1 POS 10 2ND LOOK	1389	898	REFL 1 POS 27 2ND LOOK	3972
322	REFL 2 POS 10 2ND LOOK	1205	900	REFL 2 POS 27 2ND LOOK	3785
324	SCENE DATA BP 10	16169	902	SCENE DATA BP 27	16158
326	CH 3	16237	904	CH 3	16240
328	CH 4	17361	906	CH 4	17369
330	CH 5	16747	908	CH 5	16749
332	CH 6	16594	910	CH 6	16593
334	CH 7	16347	912	CH 7	16344
336	CH 8	16422	914	CH 8	16419
338	CH 9	15939	916	CH 9	15938
340	CH 10	17202	918	CH 10	17203
342	CH 11	16982	920	CH 11	16974
344	CH 12	19774	922	CH 12	19734
346	CH 13	17669	924	CH 13	17688
348	CH 14	14825	926	CH 14	14825
350	REFLECTOR 1 POSITION 11	1533	928	REFLECTOR 1 POSITION 28	4111
352	REFLECTOR 2 POSITION 11	1355	930	REFLECTOR 2 POSITION 28	3937
354	REFL 1 POS 11 2ND LOOK	1359	932	REFL 1 POS 28 2ND LOOK	4114
356	REFL 2 POS 11 2ND LOOK	1357	934	REFL 2 POS 28 2ND LOOK	3936
358	SCENE DATA BP 11	16151	936	SCENE DATA BP 28	16143
360	CH 3	16237	938	CH 3	16237
362	CH 4	17366	940	CH 4	17367
364	CH 5	16746	942	CH 5	16745
366	CH 6	16593	944	CH 6	16595
368	CH 7	16345	946	CH 7	16341
370	CH 8	16421	948	CH 8	16421
372	CH 9	15947	950	CH 9	15941
374	CH 10	17203	952	CH 10	17199
376	CH 11	16978	954	CH 11	16974
378	CH 12	19747	956	CH 12	19759
380	CH 13	17683	958	CH 13	17671
382	CH 14	14825	960	CH 14	14827
384	REFLECTOR 1 POSITION 12	1686	962	REFLECTOR 1 POSITION 29	4259
386	REFLECTOR 2 POSITION 12	1506	964	REFLECTOR 2 POSITION 29	4083
388	REFL 1 POS 12 2ND LOOK	1691	966	REFL 1 POS 29 2ND LOOK	4267
390	REFL 2 POS 12 2ND LOOK	1509	968	REFL 2 POS 29 2ND LOOK	4088
392	SCENE DATA BP 12	16179	970	SCENE DATA BP 29	16121

FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16237	972	REFLECTOR 1 POSITION 30	16262
396	CH 5	17366	974	REFLECTOR 2 POSITION 30	17395
398	CH 6	16750	976	REFL 1 POS 30 2ND LOOK	16745
400	CH 7	16594	978	REFL 2 POS 30 2ND LOOK	16596
402	CH 8	16346	980	SCENE DATA BP 30	16383
404	CH 9	16421	982	CH 3	16420
406	CH 10	15938	984	CH 4	15944
408	CH 11	17198	986	CH 5	17205
410	CH 12	16975	988	CH 6	16974
412	CH 13	19781	990	CH 7	19769
414	CH 14	17673	992	CH 8	17668
416	CH 15	14826	994	CH 9	14827
418	REFLECTOR 1 POSITION 13	1840	996	CH 10	4419
420	REFLECTOR 2 POSITION 13	1658	998	CH 11	4236
422	REFL 1 POS 13 2ND LOOK	1843	1000	CH 12	4222
424	REFL 2 POS 13 2ND LOOK	1660	1002	CH 13	4239
426	SCENE DATA BP 13	16154	1004	CH 14	16183
428	CH 3	16241	1006	CH 15	16252
430	CH 4	17370	1008	CH 30	17372
432	CH 5	16760	1010	CH 30	16748
434	CH 6	16608	1012	CH 30	16593
436	CH 7	16354	1014	CH 30	16350
438	CH 8	16440	1016	CH 30	16426
440	CH 9	15950	1018	CH 30	15941
442	CH 10	17225	1020	CH 30	17201
444	CH 11	16985	1022	CH 30	16975
446	CH 12	19759	1024	CH 30	19745
448	CH 13	17677	1026	CH 30	17679
450	CH 14	14836	1028	CH 30	14826
452	REFLECTOR 1 POSITION 14	1989	1030	REFLECTOR 1 COLD CAL POS	6017
454	REFLECTOR 2 POSITION 14	1808	1032	REFLECTOR 2 COLD CAL POS	5833
456	REFL 1 POS 14 2ND LOOK	1995	1034	REFL 1 COLD CAL 2ND LOOK	6017
458	REFL 2 POS 14 2ND LOOK	1812	1036	REFL 2 COLD CAL 2ND LOOK	5833
460	SCENE DATA BP 14	16153	1038	COLD CAL DATA 1	16201
462	CH 3	16235	1040	CH 3	16241
464	CH 4	17377	1042	CH 4	17370
466	CH 5	16759	1044	CH 5	16746
468	CH 6	16610	1046	CH 6	16595
470	CH 7	16341	1048	CH 7	16357
472	CH 8	16430	1050	CH 8	16420
474	CH 9	15964	1052	CH 9	15943
476	CH 10	17213	1054	CH 10	17200
478	CH 11	16980	1056	CH 11	16983
480	CH 12	19759	1058	CH 12	19754
482	CH 13	17679	1060	CH 13	17670
484	CH 14	14835	1062	CH 14	14825
486	REFLECTOR 1 POSITION 15	2143	1064	REFLECTOR 1 COLD CAL DATA 2	16200
488	REFLECTOR 2 POSITION 15	1962	1066	REFL 1 POS 15 2ND LOOK	16243
490	REFL 1 POS 15 2ND LOOK	2146	1068	REFL 2 POS 15 2ND LOOK	17372
492	REFL 2 POS 15 2ND LOOK	1964	1070	CH 15	16746

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	3	1072		16175
496		CH	1074		16246
498		CH	1076		17375
500		CH	1078		16763
502		CH	1080		16616
504		CH	1082		16354
506		CH	1084		16439
508		CH	1086		15949
510		CH	1088		17214
512		CH	1182	REFLECTOR 1 WARM CAL POS	16981
514		CH	1184	REFLECTOR 2 WARM CAL POS	19745
516		CH	1186	REFL 1 WARM CAL 2ND LOOK	17686
518		CH	1188	REFL 2 WARM CAL 2ND LOOK	14835
520	REFLECTOR 1 POSITION 16	16	1190	WARM CAL DATA 1	2294
522	REFLECTOR 2 POSITION 16	16	1192		2112
524	REFL 1 POS 16 2ND LOOK	16	1194		2298
526	REFL 2 POS 16 2ND LOOK	16	1196		2115
528	SCENE DATA BP 16	16	1198		16214
530		CH	1200		16263
532		CH	1202		17380
534		CH	1204		16759
536		CH	1206		16610
538		CH	1208		16361
540		CH	1210		16434
542		CH	1212		15943
544		CH	1214		17224
546		CH	1216		16979
548		CH	1218		19758
550		CH	1220		17671
552		CH	1222		14831
554	REFLECTOR 1 POSITION 17	17	1224		2445
556	REFLECTOR 2 POSITION 17	17	1226		2461
558	REFL 1 POS 17 2ND LOOK	17	1228		2449
560	REFL 2 POS 17 2ND LOOK	17	1230		2265
562	SCENE DATA BP 17	17	1232		16162
564		CH	1234		16241
566		CH	1236		17382
568		CH	1238		16762
570		CH	1240		16603
			1072		16595
			1074		16364
			1076		16419
			1078		15941
			1080		17201
			1082		16974
			1084		17651
			1086		17651
			1088		14826
			1182		10416
			1184		10232
			1186		10416
			1188		10232
			1190		16163
			1192		16232
			1194		17364
			1196		16740
			1198		16587
			1200		16342
			1202		16415
			1204		15934
			1206		17198
			1208		16967
			1210		19731
			1212		17676
			1214		14820
			1216		16155
			1218		16233
			1220		17364
			1222		16737
			1224		16587
			1226		16343
			1228		16416
			1230		15930
			1232		17198
			1234		16962
			1236		19743
			1238		17673
			1240		14822

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE DEG C
1090	SCAN MOTOR A1-1	17909	23.40
1092	SCAN MOTOR A1-2	18656	23.63
1094	FEEDHORN A1-1	19143	25.18
1096	FEEDHORN A1-2	19673	26.22
1098	RF MUX A1-1	20360	27.05
1100	RF MUX A1-2	20970	28.23
1102	LOCAL OSCILLATOR CHANNEL 3	21951	30.04
1104	LOCAL OSCILLATOR CHANNEL 4	21948	29.72
1106	LOCAL OSCILLATOR CHANNEL 5	21597	29.57
1108	LOCAL OSCILLATOR CHANNEL 6	20206	27.11
1110	LOCAL OSCILLATOR CHANNEL 7	20757	27.95
1112	LOCAL OSCILLATOR CHANNEL 8	21054	29.43
1114	LOCAL OSCILLATOR CHANNEL 15	21774	29.35
1116	PLL LO #2 CHANNELS 9 THROUGH 14	20140	26.66
1118	PLL LO #1 CHANNELS 9 THROUGH 14	22668	31.48
1120	SPARE (NOT USED)	32767	51.27
1122	MIXER/IF AMPLIFIER CHANNEL 3	21643	28.64
1124	MIXER/IF AMPLIFIER CHANNEL 4	21648	28.85
1126	MIXER/IF AMPLIFIER CHANNEL 5	21297	28.56
1128	MIXER/IF AMPLIFIER CHANNEL 6	20546	27.48
1130	MIXER/IF AMPLIFIER CHANNEL 7	20597	27.82
1132	MIXER/IF AMPLIFIER CHANNEL 8	21467	28.83
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20553	27.00
1136	MIXER/IF AMPLIFIER CHANNEL 15	21260	29.31
1138	IF AMPLIFIER CHANNEL 11 THRU 14	21246	28.87
1140	IF AMPLIFIER CHANNEL 9	21265	28.97
1142	IF AMPLIFIER CHANNEL 10	21429	28.97
1144	IF AMPLIFIER CHANNEL 11	20320	27.16
1146	DC/DC CONVERTER	21634	29.55
1148	IF AMPLIFIER CHANNEL 13	20341	27.17
1150	IF AMPLIFIER CHANNEL 14	20450	27.48
1152	IF AMPLIFIER CHANNEL 12	20238	27.09
1154	RF SHELF A1-1	20209	27.89
1156	RF SHELF A1-2	20813	28.21
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	19311	25.55
1160	A1-1 WARM LOAD 1	23606	23.54
1162	A1-1 WARM LOAD 2	23357	23.47
1164	A1-1 WARM LOAD 3	23593	23.56
1166	A1-1 WARM LOAD 4	23525	23.51
1168	A1-1 WARM LOAD CENTER	23611	23.65
1170	A1-2 WARM LOAD 1	23851	24.43
1172	A1-2 WARM LOAD 2	24003	24.36
1174	A1-2 WARM LOAD 3	24161	24.48
1176	A1-2 WARM LOAD 4	23944	24.52
1178	A1-2 WARM LOAD CENTER	23829	24.40
1180	TEMP SENSOR REFERENCE VOLTAGE	25322	

DESCRIPTION

STATUS

STATUS

STATUS

SCANNER A1-1 POWER	ON		ON
SCANNER A1-2 POWER	ON		ON
PLL POWER	PLLO # 1	PLLO # 1	PLLO # 1
ANTENNA IN WARM CAL POSITION MODE	NO	NO	NO
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO
ANTENNA IN NADIR POSITION MODE	NO	NO	NO
ANTENNA IN FULL SCAN MODE	YES	YES	YES
SURVIVAL HEATER POWER	OFF	OFF	OFF
MODULE POWER	CONNECT	CONNECT	CONNECT
COLD CAL POSITION MSB	ZERO	ZERO	ZERO
COLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA

DESCRIPTION

VALUE

DEG C

VALUE

DEG C

A1-1 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4
A1-2 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4
A1-1 RF SHELF TEMPERATURE	216	20.7	216	20.7
A1-2 RF SHELF TEMPERATURE	218	23.4	218	23.4
A1-1 WARM LOAD TEMPERATURE	214	18.0	214	18.0
A1-2 WARM LOAD TEMPERATURE	216	20.7	216	20.7

DESCRIPTION

VALUE

VALUE

AMPS/VOLTS

VALUE

AMPS/VOLTS

A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	88	41.01	89	41.47
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	85	39.61	86	40.08
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67
ANTENNA DRIVE +15 VDC	171	14.76	172	14.84
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	148	-15.15	149	-15.10
RECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	146	4.87	147	4.90
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76
PHASE LOCK LOOP (CHANNEL 9/14)	169	14.58	169	14.58
PHASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30
L.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 3)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78
PLLO # 2 LOCK DETECT	1	0.02	1	0.02
PLLO # 1 LOCK DETECT	220	4.40	220	4.40
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

P1 20-NOV-99 11:52:11 SCAN NUMBER 1

AMSU A1-33 A1.EXE FULL SCAN MODE
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

COMMANDS
[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL0 # 1 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 3

ATB HIGH FREQ. TRANSIENTS 2.86Hz

3.2.4.2.3.3.2

PRE-INJECTION

9/0: 748613 OP: 0810 1st CPT
P/N: 1331720-3-II SN: 109
TDS SI
TEST ENG: (7A)
DATE: 11/20/99
(139/T)

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	11111111	572	SCENE DATA	16348
2	SYNC SEQUENCE	11111111	574	BP	16418
3	SYNC SEQUENCE	11111111	576		15960
4	UNIT ID AND SERIAL NO	00100001	578		17212
5	DIGITAL B DATA	00000010	580		16974
6	DIGITAL B DATA	00001110	582		19759
7	DIGITAL B DATA	00000000	584		17682
8	DIGITAL B DATA	00000000	586		14811
10	REFLECTOR 1 POSITION	16224	588	REFLECTOR 1 POSITION	2598
12	REFLECTOR 2 POSITION	16224	590	REFLECTOR 2 POSITION	2417
14	REFL 1 POS	16224	592	REFL 1 POS	2601
16	REFL 2 POS	16164	594	REFL 2 POS	2419
18	SCENE DATA	16223	596	SCENE DATA	16157
20		17360	598		16223
22		16575	600		17365
24		16349	602		16748
26		16401	604		16597
28		15926	606		16358
30		17191	608		16413
32		16961	610		15930
34		19747	612		17205
36		17677	614		16963
38		14803	616		19744
40		166	618		17673
42		16372	620		14814
44		16376	622		2747
46		16375	624		2566
48		16169	626		2753
50		16215	628		2570
52		17355	630		16143
54		16578	632		16212
56		16337	634		17347
58		15924	636		16732
60		17191	638		16577
62		16958	640		16329
64		19746	642		16402
66		17675	644		15927
68		14802	646		17190
70		324	648		16963
72		142	650		19736
74		326	652		17671
76		147	654		14803
78		16145	656		2900
80		16209	658		2716
82		17345	660		2905
84		16737	662		2722
86			664		16148
88			666		16211
90			668		17346
92			670		16731

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16577	672	REFLECTOR 1 POSITION 21	16578
96	CH 8	16325	674	REFLECTOR 2 POSITION 21	16331
98	CH 9	16402	676	REFL 1 POS 21	16405
100	CH 10	15929	678	REFL 2 POS 21	15926
102	CH 11	17188	680	SCENE DATA BP 21	17192
104	CH 12	16964	682		16953
106	CH 13	19738	684		19727
108	CH 14	17664	686		17661
110	CH 15	14804	688		14802
112	REFLECTOR 1 POSITION 4	474	690		3052
114	REFLECTOR 2 POSITION 4	296	692		2869
116	REFL 1 POS 4	478	694		3057
118	REFL 2 POS 4	299	696		2873
120	SCENE DATA BP 4	16152	698		16146
122	CH 3	16208	700		16210
124	CH 4	17340	702		17346
126	CH 5	16744	704		16730
128	CH 6	16582	706		16575
130	CH 7	16331	708		16332
132	CH 8	16411	710		16399
134	CH 9	15942	712		15926
136	CH 10	17203	714		17185
138	CH 11	16963	716		16965
140	CH 12	19722	718		19726
142	CH 13	17657	720		17663
144	CH 14	14807	722		14802
146	CH 15	625	724		3202
148	REFLECTOR 1 POSITION 5	445	726		3022
150	REFLECTOR 2 POSITION 5	632	728		3206
152	REFL 1 POS 5	448	730		3027
154	REFL 2 POS 5	16142	732		16146
156	SCENE DATA BP 5	16212	734		16212
158	CH 3	17349	736		17342
160	CH 4	16742	738		16733
162	CH 5	16589	740		16580
164	CH 6	16331	742		16335
166	CH 7	16412	744		16405
168	CH 8	15938	746		15926
170	CH 9	17188	748		17190
172	CH 10	16969	750		16960
174	CH 11	19748	752		19734
176	CH 12	17690	754		17651
178	CH 13	14809	756		14802
180	CH 14	779	758		3351
182	CH 15	596	760		3170
184	REFLECTOR 1 POSITION 6	781	762		3357
186	REFLECTOR 2 POSITION 6	598	764		3177
188	REFL 1 POS 6	16150	766		16144
190	REFL 2 POS 6	16213	768		16210
192	SCENE DATA BP 6	17343	770		17347

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH	16749	772	CH	16729
196	CH	16592	774	CH	16576
198	CH	16330	776	CH	16335
200	CH	16419	778	CH	16400
202	CH	15931	780	CH	15925
204	CH	17203	782	CH	17193
206	CH	16969	784	CH	16954
208	CH	19742	786	CH	19735
210	CH	17681	788	CH	17647
212	CH	14813	790	CH	14802
214	REFLECTOR 1 POSITION	929	792	REFLECTOR 1 POSITION	3504
216	REFLECTOR 2 POSITION	749	794	REFLECTOR 2 POSITION	3325
218	REFL 1 POS	933	796	REFL 1 POS	3508
220	REFL 2 POS	748	798	REFL 2 POS	3329
222	SCENE DATA	16155	800	SCENE DATA	16146
224	CH	16211	802	CH	16211
226	CH	17341	804	CH	17348
228	CH	16730	806	CH	16729
230	CH	16577	808	CH	16576
232	CH	16329	810	CH	16329
234	CH	16404	812	CH	16400
236	CH	15925	814	CH	15924
238	CH	17191	816	CH	17195
240	CH	16957	818	CH	16964
242	CH	19731	820	CH	19747
244	CH	17680	822	CH	17662
246	CH	14803	824	CH	14802
248	REFLECTOR 1 POSITION	1080	826	REFLECTOR 1 POSITION	3653
250	REFLECTOR 2 POSITION	899	828	REFLECTOR 2 POSITION	3475
252	REFL 1 POS	1085	830	REFL 1 POS	3659
254	REFL 2 POS	902	832	REFL 2 POS	3480
256	SCENE DATA	16144	834	SCENE DATA	16144
258	CH	16213	836	CH	16209
260	CH	17346	838	CH	17347
262	CH	16730	840	CH	16730
264	CH	16581	842	CH	16576
266	CH	16325	844	CH	16329
268	CH	16404	846	CH	16402
270	CH	15926	848	CH	15928
272	CH	17190	850	CH	17188
274	CH	16959	852	CH	16957
276	CH	19742	854	CH	19745
278	CH	17664	856	CH	17673
280	CH	14805	858	CH	14803
282	REFLECTOR 1 POSITION	12333	860	REFLECTOR 1 POSITION	3806
284	REFLECTOR 2 POSITION	10522	862	REFLECTOR 2 POSITION	3626
286	REFL 1 POS	12336	864	REFL 1 POS	3812
288	REFL 2 POS	1054	866	REFL 2 POS	3632
290	SCENE DATA	16146	868	SCENE DATA	16161
292	CH	16214	870	CH	16213

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17352	872	CH 5	17349
296	CH 6	16734	874	CH 6	16729
298	CH 7	16578	876	CH 7	16577
300	CH 8	16334	878	CH 8	16336
302	CH 9	16403	880	CH 9	16399
304	CH 10	15923	882	CH 10	15923
306	CH 11	17192	884	CH 11	17188
308	CH 12	16960	886	CH 12	16958
310	CH 13	19741	888	CH 13	19729
312	CH 14	17652	890	CH 14	17656
314	CH 15	14803	892	CH 15	14802
316	REFLECTOR 1 POSITION 10	1385	894	REFLECTOR 1 POSITION 27	3970
318	REFLECTOR 2 POSITION 10	1203	896	REFLECTOR 2 POSITION 27	3780
320	REFL 1 POS 10 2ND LOOK	1389	898	REFL 1 POS 27 2ND LOOK	3971
322	REFL 2 POS 10 2ND LOOK	1204	900	REFL 2 POS 27 2ND LOOK	3785
324	SCENE DATA BP 10	16156	902	SCENE DATA BP 27	16142
326	CH 3	16212	904	CH 3	16215
328	CH 4	17348	906	CH 4	17353
330	CH 5	16731	908	CH 5	16733
332	CH 6	16576	910	CH 6	16574
334	CH 7	16333	912	CH 7	16333
336	CH 8	16402	914	CH 8	16402
338	CH 9	15925	916	CH 9	15921
340	CH 10	17197	918	CH 10	17189
342	CH 11	16960	920	CH 11	16961
344	CH 12	19735	922	CH 12	19728
346	CH 13	17641	924	CH 13	17673
348	CH 14	14802	926	CH 14	14802
350	CH 15	1534	928	CH 15	4111
352	REFLECTOR 1 POSITION 11	1354	930	REFLECTOR 1 POSITION 28	3937
354	REFLECTOR 2 POSITION 11	1539	932	REFLECTOR 2 POSITION 28	4114
356	REFL 1 POS 11 2ND LOOK	1357	934	REFL 1 POS 28 2ND LOOK	3936
358	REFL 2 POS 11 2ND LOOK	16126	936	REFL 2 POS 28 2ND LOOK	16131
360	SCENE DATA BP 11	16212	938	SCENE DATA BP 28	16223
362	CH 3	17350	940	CH 3	17350
364	CH 4	16730	942	CH 4	16727
366	CH 5	16579	944	CH 5	16577
368	CH 6	16335	946	CH 6	16329
370	CH 7	16400	948	CH 7	16398
372	CH 8	15925	950	CH 8	15924
374	CH 9	17195	952	CH 9	17193
376	CH 10	16951	954	CH 10	16958
378	CH 11	19730	956	CH 11	19732
380	CH 12	17647	958	CH 12	17657
382	CH 13	14803	960	CH 13	14801
384	REFLECTOR 1 POSITION 12	1686	962	REFLECTOR 1 POSITION 29	4259
386	REFLECTOR 2 POSITION 12	1507	964	REFLECTOR 2 POSITION 29	4083
388	REFL 1 POS 12 2ND LOOK	1692	966	REFL 1 POS 29 2ND LOOK	4268
390	REFL 2 POS 12 2ND LOOK	1509	968	REFL 2 POS 29 2ND LOOK	4087
392	SCENE DATA BP 12	16159	970	SCENE DATA BP 29	16106

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16213	972	REFLECTOR 1 POSITION 30	16240
396	CH 5	17347	974	REFLECTOR 2 POSITION 30	17382
398	CH 6	16731	976	REFL 1 POS 30 2ND LOOK	16733
400	CH 7	16577	978	REFL 2 POS 30 2ND LOOK	16577
402	CH 8	16336	980	SCENE DATA BP 30	16377
404	CH 9	16405	982		16406
406	CH 10	15924	984		15924
408	CH 11	17193	986		17186
410	CH 12	16963	988		16959
412	CH 13	19735	990		19744
414	CH 14	17641	992		17668
416	CH 15	14803	994		14802
418	REFLECTOR 1 POSITION 13	1839	996		4420
420	REFLECTOR 2 POSITION 13	1657	998		4235
422	REFL 1 POS 13 2ND LOOK	1843	1000		4423
424	REFL 2 POS 13 2ND LOOK	1660	1002		4239
426	SCENE DATA BP 13	16138	1004		16174
428	CH 3	16215	1006		16229
430	CH 4	17353	1008		17355
432	CH 5	16748	1010		16732
434	CH 6	16594	1012		16575
436	CH 7	16344	1014		16344
438	CH 8	16421	1016		16402
440	CH 9	15930	1018		15925
442	CH 10	17211	1020		17197
444	CH 11	16969	1022		16955
446	CH 12	19743	1024		19737
448	CH 13	17677	1026		17675
450	CH 14	14813	1028		14803
452	REFLECTOR 1 POSITION 14	1990	1030	REFLECTOR 1 COLD CAL POS	6018
454	REFLECTOR 2 POSITION 14	1808	1032	REFLECTOR 2 COLD CAL POS	5833
456	REFL 1 POS 14 2ND LOOK	1995	1034	REFL 1 COLD CAL 2ND LOOK	6017
458	REFL 2 POS 14 2ND LOOK	1812	1036	REFL 2 COLD CAL 2ND LOOK	5833
460	SCENE DATA BP 14	16139	1038	COLD CAL DATA 1	16187
462	CH 3	16216	1040		16220
464	CH 4	17364	1042		17351
466	CH 5	16745	1044		16726
468	CH 6	16594	1046		16576
470	CH 7	16329	1048		16348
472	CH 8	16416	1050		16403
474	CH 9	15951	1052		15927
476	CH 10	17211	1054		17190
478	CH 11	16967	1056		16961
480	CH 12	19732	1058		19724
482	CH 13	17659	1060		17672
484	CH 14	14811	1062		14802
486	REFLECTOR 1 POSITION 15	2143	1064	COLD CAL DATA 2	16182
488	REFLECTOR 2 POSITION 15	1964	1066		16218
490	REFL 1 POS 15 2ND LOOK	2146	1068		16218
492	REFL 2 POS 15 2ND LOOK	1964	1070		16727

ELEMENT	DESCRIPTION	BP	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA	15	16166	1072	CH 7	16576
496			16227	1074	CH 8	16347
498			17360	1076	CH 9	16399
500			16751	1078	CH 10	15926
502			16600	1080	CH 11	17193
504			16344	1082	CH 12	16951
506			16425	1084	CH 13	19719
508			15930	1086	CH 14	17679
510			17209	1088	CH 15	14802
512			16969	1182	REFLECTOR 1 WARM CAL POS	10416
514			19737	1184	REFLECTOR 2 WARM CAL POS	10232
516			17631	1186	REFL 1 WARM CAL 2ND LOOK	10416
518			14812	1188	REFL 2 WARM CAL 2ND LOOK	10232
520	REFLECTOR 1 POSITION	16	2294	1190	WARM CAL DATA 1	16154
522	REFLECTOR 2 POSITION	16	2110	1192		16211
524	REFL 1 POS	16	2299	1194		17344
526	REFL 2 POS	16	2115	1196		16724
528	SCENE DATA	BP 16	16200	1198		16574
530			16241	1200		16331
532			17364	1202		16400
534			16747	1204		15921
536			16594	1206		17182
538			16350	1208		16949
540			16420	1210		19728
542			15926	1212		17646
544			17213	1214		14798
546			16965	1216		16144
548			19736	1218		16210
550			17687	1220		17345
552			14808	1222		16726
554	REFLECTOR 1 POSITION	17	2445	1224		16572
556	REFLECTOR 2 POSITION	17	2262	1226		16331
558	REFL 1 POS	17	2450	1228		16397
560	REFL 2 POS	17	2265	1230		15918
562	SCENE DATA	BP 17	16151	1232		17185
564			16218	1234		16953
566			17367	1236		19718
568			16746	1238		17644
570			16590	1240		14800
					WARM CAL DATA 2	

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE DEG C
1090	SCAN MOTOR A1-1	17944	23.46
1092	SCAN MOTOR A1-2	18692	23.70
1094	FEEDHORN A1-1	19206	25.30
1096	FEEDHORN A1-2	19767	26.39
1098	RF MUX A1-1	20488	27.29
1100	RF MUX A1-2	21124	28.52
1102	LOCAL OSCILLATOR CHANNEL 3	22180	30.48
1104	LOCAL OSCILLATOR CHANNEL 4	22185	30.18
1106	LOCAL OSCILLATOR CHANNEL 5	21808	29.97
1108	LOCAL OSCILLATOR CHANNEL 6	20346	27.38
1110	LOCAL OSCILLATOR CHANNEL 7	20910	28.24
1112	LOCAL OSCILLATOR CHANNEL 8	21253	29.82
1114	LOCAL OSCILLATOR CHANNEL 15	21999	29.78
1116	PLL LO #2 CHANNELS 9 THROUGH 14	20209	26.79
1118	PLL LO #1 CHANNELS 9 THROUGH 14	23045	32.21
1120	SPARE (NOT USED)	32767	51.27
1122	MIXER/IF AMPLIFIER CHANNEL 3	21796	28.93
1124	MIXER/IF AMPLIFIER CHANNEL 4	21811	29.16
1126	MIXER/IF AMPLIFIER CHANNEL 5	21459	28.87
1128	MIXER/IF AMPLIFIER CHANNEL 6	20678	27.73
1130	MIXER/IF AMPLIFIER CHANNEL 7	20736	28.08
1132	MIXER/IF AMPLIFIER CHANNEL 8	21638	29.15
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20658	27.20
1136	MIXER/IF AMPLIFIER CHANNEL 15	21464	29.70
1138	IF AMPLIFIER CHANNEL 11 THRU 14	21453	29.27
1140	IF AMPLIFIER CHANNEL 9	21478	29.38
1142	IF AMPLIFIER CHANNEL 10	21639	29.38
1144	IF AMPLIFIER CHANNEL 11	20436	27.38
1146	DC/DC CONVERTER	21956	30.16
1148	IF AMPLIFIER CHANNEL 13	20457	27.39
1150	IF AMPLIFIER CHANNEL 14	20563	27.69
1152	IF AMPLIFIER CHANNEL 12	20353	27.31
1154	RF SHELF A1-1	20391	28.23
1156	RF SHELF A1-2	20978	28.52
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	19385	25.69
1160	A1-1 WARM LOAD 1	23612	25.55
1162	A1-1 WARM LOAD 2	23369	23.50
1164	A1-1 WARM LOAD 3	23603	23.58
1166	A1-1 WARM LOAD 4	23529	23.51
1168	A1-1 WARM LOAD CENTER	23863	23.66
1170	A1-2 WARM LOAD 1	24015	24.45
1172	A1-2 WARM LOAD 2	24176	24.39
1174	A1-2 WARM LOAD 3	23950	24.51
1176	A1-2 WARM LOAD 4	23835	24.53
1178	A1-2 WARM LOAD CENTER	25323	24.41
1180	TEMP SENSOR REFERENCE VOLTAGE		

DESCRIPTION

STATUS

STATUS

STATUS

DESCRIPTION	STATUS	STATUS	STATUS
SCANNER A1-1 POWER	ON	ON	ON
SCANNER A1-2 POWER	ON	ON	ON
PLL POWER	PLLO # 1	PLLO # 1	PLLO # 1
ANTENNA IN WARM CAL POSITION MODE	NO	NO	NO
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO
ANTENNA IN NADIR POSITION MODE	NO	NO	NO
ANTENNA IN FULL SCAN MODE	YES	YES	YES
SURVIVAL HEATER POWER	OFF	OFF	OFF
MODULE POWER	CONNECT	CONNECT	CONNECT
COLD CAL POSITION MSB	ZERO	ZERO	ZERO
COLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA

DESCRIPTION

VALUE

VALUE

DEG C

VALUE

DEG C

DESCRIPTION	VALUE	DEG C	VALUE	DEG C
A1-1 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4
A1-2 SCANNER MOTOR TEMPERATURE	215	19.4	215	19.4
A1-1 RF SHELF TEMPERATURE	217	22.1	217	22.1
A1-2 RF SHELF TEMPERATURE	218	23.4	218	23.4
A1-1 WARM LOAD TEMPERATURE	215	19.4	215	19.4
A1-2 WARM LOAD TEMPERATURE	216	20.7	216	20.7

DESCRIPTION

VALUE

VALUE

AMPS/VOLTS

VALUE

AMPS/VOLTS

DESCRIPTION	VALUE	AMPS/VOLTS	VALUE	AMPS/VOLTS
A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	88	41.01	89	41.47
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	85	39.61	86	40.08
SIGNAL PROCESSING +15 VDC	170	14.76	170	14.67
ANTENNA DRIVE +15 VDC	171	14.76	172	14.84
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15
ANTENNA DRIVE -15 VDC	148	-15.15	149	-15.10
RECEIVER AMPLIFIER +8 VDC	157	7.85	157	7.85
SIGNAL PROCESSOR +5 VDC	145	4.83	145	4.83
ANTENNA DRIVE +5 VDC	146	4.87	147	4.90
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76
PHASE LOCK LOOP (CHANNEL 9/14)	169	14.58	169	14.58
PHASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30
PHASE LOCK LOOP (CHANNEL 8)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 6)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 3)	171	9.78	171	9.78
L.O. VOLTAGE (CHANNEL 4)	172	9.84	172	9.84
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78
PLL # 2 LOCK DETECT	1	0.02	1	0.02
PLL # 1 LOCK DETECT	219	4.38	220	4.40
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

AMSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 11:54:37 SCAN NUMBER 20
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

COMMANDS
[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL0 # 1 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 3

ATB HIGH FREQ. TRANSIENTS 2.86 Hz
3.2.4.2.3.3.2
lost - INJECTION

9/0: 748613 OP: 0810 1ST CPT
P/N: 1331720-3-II SN: 109

TDs 51

(139/T)

TEST ENG: (TA) DATE: 11/20/97

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	1	572	SCENE DATA	8
2	SYNC SEQUENCE	2	574	BP	17
3	SYNC SEQUENCE	3	576		
4	UNIT ID AND SERIAL NO	1	578		
5	DIGITAL B DATA	1	580		
6	DIGITAL B DATA	2	582		
7	DIGITAL B DATA	3	584		
8	DIGITAL B DATA	4	586		
10	REFLECTOR 1 POSITION	1	588	REFLECTOR 1 POSITION	18
12	REFLECTOR 2 POSITION	1	590	REFLECTOR 2 POSITION	18
14	REFL 1 POS	1	592	REFL 1 POS	18
16	REFL 2 POS	1	594	REFL 2 POS	18
18	SCENE DATA	BP	596	SCENE DATA	BP
20			598		
22			600		
24			602		
26			604		
28			606		
30			608		
32			610		
34			612		
36			614		
38			616		
40			618		
42			620		
44	REFLECTOR 1 POSITION	2	622	REFLECTOR 1 POSITION	19
46	REFLECTOR 2 POSITION	2	624	REFLECTOR 2 POSITION	19
48	REFL 1 POS	2	626	REFL 1 POS	19
50	REFL 2 POS	2	628	REFL 2 POS	19
52	SCENE DATA	BP	630	SCENE DATA	BP
54			632		
56			634		
58			636		
60			638		
62			640		
64			642		
66			644		
68			646		
70			648		
72			650		
74			652		
76			654		
78	REFLECTOR 1 POSITION	3	656	REFLECTOR 1 POSITION	20
80	REFLECTOR 2 POSITION	3	658	REFLECTOR 2 POSITION	20
82	REFL 1 POS	3	660	REFL 1 POS	20
84	REFL 2 POS	3	662	REFL 2 POS	20
86	SCENE DATA	BP	664	SCENE DATA	BP
88			666		
90			668		
92			670		

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16572	672	CH 7	16571
96	CH 8	16320	674	CH 8	16327
98	CH 9	16395	676	CH 9	16394
100	CH 10	15920	678	CH 10	15911
102	CH 11	17178	680	CH 11	17180
104	CH 12	16952	682	CH 12	16946
106	CH 13	19717	684	CH 13	19710
108	CH 14	17646	686	CH 14	17664
110	CH 15	14794	688	CH 15	14792
112	REFLECTOR 1 POSITION	476	690	REFLECTOR 1 POSITION 21	30522
114	REFLECTOR 2 POSITION	295	692	REFLECTOR 2 POSITION 21	28677
116	REFL 1 POS 4	479	694	REFL 1 POS 21	3056
118	REFL 2 POS 4	299	696	REFL 2 POS 21	2873
120	SCENE DATA BP 4	16140	698	SCENE DATA BP 21	16145
122	CH 3	16201	700	CH 3	16197
124	CH 4	17334	702	CH 4	17335
126	CH 5	16734	704	CH 5	16722
128	CH 6	16579	706	CH 6	16572
130	CH 7	16320	708	CH 7	16317
132	CH 8	16403	710	CH 8	16396
134	CH 9	15929	712	CH 9	15913
136	CH 10	17190	714	CH 10	17172
138	CH 11	16951	716	CH 11	16946
140	CH 12	19718	718	CH 12	19716
142	CH 13	17643	720	CH 13	17646
144	CH 14	14797	722	CH 14	14791
146	CH 15	625	724	CH 15	3201
148	REFLECTOR 1 POSITION	445	726	REFLECTOR 1 POSITION 22	3022
150	REFLECTOR 2 POSITION	631	728	REFLECTOR 2 POSITION 22	3026
152	REFL 1 POS 5	448	730	REFL 1 POS 22	3027
154	REFL 2 POS 5	16137	732	REFL 2 POS 22	16144
156	SCENE DATA BP 5	16198	734	SCENE DATA BP 22	16198
158	CH 3	17338	736	CH 3	17330
160	CH 4	16734	738	CH 4	16720
162	CH 5	16586	740	CH 5	16572
164	CH 6	16323	742	CH 6	16572
166	CH 7	16407	744	CH 7	16394
168	CH 8	15931	746	CH 8	15914
170	CH 9	17180	748	CH 9	17179
172	CH 10	16949	750	CH 10	16944
174	CH 11	19728	752	CH 11	19726
176	CH 12	17677	754	CH 12	17641
178	CH 13	14798	756	CH 13	14791
180	CH 14	778	758	CH 14	3350
182	REFLECTOR 1 POSITION	597	760	REFLECTOR 1 POSITION 23	3171
184	REFLECTOR 2 POSITION	782	762	REFLECTOR 2 POSITION 23	3357
186	REFL 1 POS 6	598	764	REFL 1 POS 23	3177
188	REFL 2 POS 6	16140	766	REFL 2 POS 23	16141
190	SCENE DATA BP 6	16196	768	SCENE DATA BP 23	16197
192	CH 3	17338	770	CH 3	17334
	CH 4			CH 4	
	CH 5			CH 5	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH	16736	772	REFLECTOR 1 POSITION	16721
196	CH	16586	774	REFLECTOR 2 POSITION	16575
198	CH	16321	776	REFL 1 POS	16323
200	CH	16409	778	REFL 2 POS	16390
202	CH	15922	780	SCENE DATA	15912
204	CH	17191	782	BP	17179
206	CH	16960	784		16947
208	CH	19731	786		19718
210	CH	17644	788		17649
212	CH	14803	790		14790
214	CH	928	792		35055
216	CH	747	794		33258
218	CH	933	796		3508
220	CH	749	798		3330
222	CH	16152	800		16144
224	CH	16202	802		16199
226	CH	17337	804		17337
228	CH	16723	806		16719
230	CH	16571	808		16574
232	CH	16319	810		16319
234	CH	15917	812		16393
236	CH	17183	814		15919
238	CH	16943	816		17174
240	CH	19725	818		16949
242	CH	17641	820		19714
244	CH	14792	822		17659
246	CH	1080	824		14792
248	CH	898	826		36553
250	CH	1085	828		34755
252	CH	902	830		3659
254	CH	16136	832		3480
256	CH	16198	834		16134
258	CH	17341	836		16196
260	CH	16723	838		17339
262	CH	16569	840		16721
264	CH	16320	842		16575
266	CH	16398	844		16321
268	CH	15917	846		16395
270	CH	17179	848		15917
272	CH	16949	850		17176
274	CH	19723	852		16953
276	CH	17664	854		19727
278	CH	14791	856		17647
280	CH	1233	858		14790
282	CH	1052	860		3806
284	CH	1237	862		3626
286	CH	1054	864		3812
288	CH	16145	866		3632
290	CH	16205	868		16154
292	CH		870		16202

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17340	872	CH 5	17338
296	CH 6	16721	874	CH 6	16721
298	CH 7	16571	876	CH 7	16575
300	CH 8	16324	878	CH 8	16325
302	CH 9	16394	880	CH 9	16394
304	CH 10	15917	882	CH 10	15914
306	CH 11	17180	884	CH 11	17175
308	CH 12	16948	886	CH 12	16943
310	CH 13	19735	888	CH 13	19719
312	CH 14	19742	890	CH 14	17655
314	CH 15	14791	892	CH 15	14792
316	REFLECTOR 1 POSITION 10	1385	894	REFLECTOR 1 POSITION 27	3970
318	REFLECTOR 2 POSITION 10	1203	896	REFLECTOR 2 POSITION 27	3782
320	REFL 1 POS 10	1389	898	REFL 1 POS 27	3971
322	REFL 2 POS 10	1205	900	REFL 2 POS 27	3785
324	SCENE DATA BP 10	16153	902	SCENE DATA BP 27	16133
326	CH 3	16200	904	CH 3	16206
328	CH 4	17338	906	CH 4	17348
330	CH 5	16722	908	CH 5	16722
332	CH 6	16574	910	CH 6	16570
334	CH 7	16325	912	CH 7	16326
336	CH 8	16393	914	CH 8	16392
338	CH 9	15916	916	CH 9	15912
340	CH 10	17171	918	CH 10	17181
342	CH 11	16944	920	CH 11	16950
344	CH 12	19718	922	CH 12	19733
346	CH 13	17633	924	CH 13	17648
348	CH 14	14791	926	CH 14	14791
350	CH 15	1534	928	CH 15	4110
352	REFLECTOR 1 POSITION 11	1356	930	REFLECTOR 1 POSITION 28	3935
354	REFLECTOR 2 POSITION 11	1539	932	REFLECTOR 2 POSITION 28	4116
356	REFL 1 POS 11	1356	934	REFL 1 POS 28	3936
358	REFL 2 POS 11	16130	936	REFL 2 POS 28	16123
360	SCENE DATA BP 11	16201	938	SCENE DATA BP 28	16209
362	CH 3	17341	940	CH 3	17343
364	CH 4	16723	942	CH 4	16721
366	CH 5	16572	944	CH 5	16571
368	CH 6	16321	946	CH 6	16324
370	CH 7	16393	948	CH 7	16389
372	CH 8	15919	950	CH 8	15914
374	CH 9	17180	952	CH 9	17176
376	CH 10	16940	954	CH 10	16945
378	CH 11	19698	956	CH 11	19714
380	CH 12	17648	958	CH 12	17638
382	CH 13	14792	960	CH 13	14792
384	CH 14	1686	962	CH 14	4258
386	CH 15	1507	964	CH 15	4082
388	REFLECTOR 1 POSITION 12	1592	966	REFLECTOR 1 POSITION 29	4267
390	REFLECTOR 2 POSITION 12	1692	968	REFLECTOR 2 POSITION 29	4087
392	REFL 1 POS 12	1509	970	REFL 1 POS 29	16102
	REFL 2 POS 12	16156		REFL 2 POS 29	
	SCENE DATA BP 12			SCENE DATA BP 29	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16202	972	CH 4	16232
396	CH 5	17336	974	CH 5	17374
398	CH 6	16722	976	CH 6	16720
400	CH 7	16573	978	CH 7	16574
402	CH 8	16325	980	CH 8	16366
404	CH 9	16394	982	CH 9	16391
406	CH 10	15925	984	CH 10	15915
408	CH 11	17181	986	CH 11	17181
410	CH 12	16950	988	CH 12	16947
412	CH 13	19721	990	CH 13	19704
414	CH 14	17640	992	CH 14	17637
416	CH 15	14792	994	CH 15	14791
418	REFLECTOR 1 POSITION 13	1839	996	REFLECTOR 1 POSITION 30	4419
420	REFLECTOR 2 POSITION 13	1658	998	REFLECTOR 2 POSITION 30	4235
422	REFL 1 POS 13 2ND LOOK	1843	1000	REFL 1 POS 30 2ND LOOK	4422
424	REFL 2 POS 13 2ND LOOK	1660	1002	REFL 2 POS 30 2ND LOOK	4240
426	SCENE DATA BP 13	16130	1004	SCENE DATA BP 30	16170
428	CH 3	16213	1006	CH 3	16218
430	CH 4	17351	1008	CH 4	17347
432	CH 5	16741	1010	CH 5	16718
434	CH 6	16587	1012	CH 6	16576
436	CH 7	16333	1014	CH 7	16329
438	CH 8	16410	1016	CH 8	16393
440	CH 9	15921	1018	CH 9	15923
442	CH 10	17196	1020	CH 10	17184
444	CH 11	16958	1022	CH 11	16938
446	CH 12	19733	1024	CH 12	19723
448	CH 13	17664	1026	CH 13	17640
450	CH 14	14802	1028	CH 14	14791
452	CH 15	1989	1030	CH 15	6016
454	REFLECTOR 1 POSITION 14	1809	1032	REFLECTOR 1 COLD CAL POS	5833
456	REFLECTOR 2 POSITION 14	1995	1034	REFLECTOR 2 COLD CAL POS	6016
458	REFL 1 POS 14 2ND LOOK	1812	1036	REFL 1 COLD CAL 2ND LOOK	5833
460	REFL 2 POS 14 2ND LOOK	16130	1038	REFL 2 COLD CAL 2ND LOOK	16184
462	SCENE DATA BP 14	16206	1040	COLD CAL DATA 1	16210
464	CH 3	17356	1042	CH 3	17342
466	CH 4	16732	1044	CH 4	16721
468	CH 5	16588	1046	CH 5	16570
470	CH 6	16321	1048	CH 6	16336
472	CH 7	16408	1050	CH 7	16396
474	CH 8	15943	1052	CH 8	15919
476	CH 9	17193	1054	CH 9	17179
478	CH 10	16954	1056	CH 10	16945
480	CH 11	19727	1058	CH 11	19713
482	CH 12	17661	1060	CH 12	17637
484	CH 13	14801	1062	CH 13	14791
486	CH 14	2145	1064	CH 14	16184
488	REFLECTOR 1 POSITION 15	1962	1066	REFLECTOR 1 COLD CAL DATA 2	16210
490	REFLECTOR 2 POSITION 15	2147	1068	REFLECTOR 2 COLD CAL DATA 2	17343
492	REFL 1 POS 15 2ND LOOK	1964	1070	REFL 1 POS 30 2ND LOOK	16720
	REFL 2 POS 15 2ND LOOK			REFL 2 POS 30 2ND LOOK	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	CH 3	1072		CH 7
496		CH 4	1074		CH 8
498		CH 5	1076		CH 9
500		CH 6	1078		CH 10
502		CH 7	1080		CH 11
504		CH 8	1082		CH 12
506		CH 9	1084		CH 13
508		CH 10	1086		CH 14
510		CH 11	1088		CH 15
512		CH 12	1182	REFLECTOR 1 WARM CAL POS	10415
514		CH 13	1184	REFLECTOR 2 WARM CAL POS	102335
516		CH 14	1186	REFL 1 WARM CAL 2ND LOOK	104155
518		CH 15	1188	REFL 2 WARM CAL 2ND LOOK	102343
520	REFLECTOR 1 POSITION 16	CH 16	1190	WARM CAL DATA 1	16143
522	REFLECTOR 2 POSITION 16	CH 16	1192		16200
524	REFL 1 POS 16	2ND LOOK	1194		17337
526	REFL 2 POS 16	2ND LOOK	1196		167167
528	SCENE DATA BP 16	CH 3	1198		16563
530		CH 4	1200		163233
532		CH 5	1202		16387
534		CH 6	1204		159133
536		CH 7	1206		171174
538		CH 8	1208		169399
540		CH 9	1210		197022
542		CH 10	1212		176429
544		CH 11	1214		14789
546		CH 12	1216		161399
548		CH 13	1218		161999
550		CH 14	1220		173339
552		CH 15	1222		167166
554	REFLECTOR 1 POSITION 17	CH 17	1224		16568
556	REFLECTOR 2 POSITION 17	CH 17	1226		163207
558	REFL 1 POS 17	2ND LOOK	1228		16387
560	REFL 2 POS 17	2ND LOOK	1230		159113
562	SCENE DATA BP 17	CH 3	1232		171173
564		CH 4	1234		169385
566		CH 5	1236		19705
568		CH 6	1238		176661
570		CH 7	1240		14789

ELEMENT DESCRIPTION

VALUE

1090	SCAN MOTOR A1-1	17950	23.47
1092	SCAN MOTOR A1-2	18722	23.76
1094	FEEDHORN A1-1	19247	25.38
1096	FEEDHORN A1-2	19826	26.51
1098	RF MUX A1-1	20561	27.43
1100	RF MUX A1-2	21214	28.69
1102	LOCAL OSCILLATOR CHANNEL 3	22288	30.69
1104	LOCAL OSCILLATOR CHANNEL 4	22300	30.40
1106	LOCAL OSCILLATOR CHANNEL 5	21904	30.15
1108	LOCAL OSCILLATOR CHANNEL 6	20405	27.49
1110	LOCAL OSCILLATOR CHANNEL 7	20987	28.38
1112	LOCAL OSCILLATOR CHANNEL 8	21358	30.02
1114	LOCAL OSCILLATOR CHANNEL 15	22113	29.99
1116	PLL LO #2 CHANNELS 9 THROUGH 14	20259	26.89
1118	PLL LO #1 CHANNELS 9 THROUGH 14	23215	32.53
1120	SPARE (NOT USED)	32767	51.27
1122	MIXER/IF AMPLIFIER CHANNEL 3	21886	29.10
1124	MIXER/IF AMPLIFIER CHANNEL 4	21906	29.34
1126	MIXER/IF AMPLIFIER CHANNEL 5	21553	29.05
1128	MIXER/IF AMPLIFIER CHANNEL 6	20748	27.86
1130	MIXER/IF AMPLIFIER CHANNEL 7	20817	28.24
1132	MIXER/IF AMPLIFIER CHANNEL 8	21733	29.34
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20722	27.89
1136	MIXER/IF AMPLIFIER CHANNEL 15	21562	29.48
1138	IF AMPLIFIER CHANNEL 11 THRU 14	21566	29.59
1140	IF AMPLIFIER CHANNEL 9	21588	29.59
1142	IF AMPLIFIER CHANNEL 10	21750	29.50
1144	IF AMPLIFIER CHANNEL 11	20501	27.44
1146	DC/DC CONVERTER	22105	30.44
1148	IF AMPLIFIER CHANNEL 13	20518	27.51
1150	IF AMPLIFIER CHANNEL 14	20627	27.81
1152	IF AMPLIFIER CHANNEL 12	20417	27.43
1154	RF SHELF A1-1	20487	28.70
1156	RF SHELF A1-2	21071	28.70
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	19434	25.78
1160	A1-1 WARM LOAD 1	23624	23.58
1162	A1-1 WARM LOAD 2	23370	23.50
1164	A1-1 WARM LOAD 3	23604	23.58
1166	A1-1 WARM LOAD 4	23534	23.52
1168	A1-1 WARM LOAD CENTER	23626	23.68
1170	A1-2 WARM LOAD 1	23871	24.46
1172	A1-2 WARM LOAD 2	24022	24.40
1174	A1-2 WARM LOAD 3	24179	24.52
1176	A1-2 WARM LOAD 4	23958	24.55
1178	A1-2 WARM LOAD CENTER	23846	24.43
1180	TEMP SENSOR REFERENCE VOLTAGE	25323	

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PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

AMSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 12:00:49 SCAN NUMBER 66
 [5] DIGITAL A DATA ELEMENT 0000
 [6] DIGITAL B DATA ELEMENT 00
 [7] ANALOG DATA ELEMENT 00

COMMANDS
 [9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
 [10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
 [11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
 [12] SCANNER A1 - 1 POWER = ON PLL POWER = PLL0 # 1 [18]
 [13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
 [14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]
 POWER [4] ON
 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
 SELECT TOUCHSCREEN BUTTON 3

ATB HIGH FREQ. TRANSIENTS 6.67 Hz

3.2.4. 2.3.3.2

PAE- INJECTION

9/0: 748613 OP: 0810 1ST CPT
 P/N: 1331720-3-IT SN: 109

TD: 51

(139/T)

TEST ENG: (TA) Date: 11/20/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	11111111	572	SCENE DATA	163226
2	SYNC SEQUENCE	11111111	574	BP	16393
3	SYNC SEQUENCE	11111111	576	17	15925
4	UNIT ID AND SERIAL NO	00100001	578	CH 8	17171
5	DIGITAL B DATA	00000010	580	CH 9	16936
6	DIGITAL B DATA	00001110	582	CH 10	19726
7	DIGITAL B DATA	00000000	584	CH 11	17613
8	DIGITAL B DATA	00000000	586	CH 12	14773
10	REFLECTOR 1 POSITION	16225	588	CH 13	2598
12	REFLECTOR 2 POSITION	16225	590	CH 14	2416
14	REFL 1 POS	16224	592	CH 15	2601
16	REFL 2 POS	16147	594	2ND LOOK	2419
18	SCENE DATA	16193	596	CH 3	16140
20	CH 1	17333	598	CH 4	16188
22	CH 2	16705	600	CH 5	17345
24	CH 3	16552	602	CH 6	16730
26	CH 4	16333	604	CH 7	16582
28	CH 5	16376	606	CH 8	16335
30	CH 6	16376	608	CH 9	16387
32	CH 7	15901	610	CH 10	15909
34	CH 8	17145	612	CH 11	17164
36	CH 9	16919	614	CH 12	16916
38	CH 10	19685	616	CH 13	19673
40	CH 11	17602	618	CH 14	17613
42	CH 12	14760	620	CH 15	14773
44	REFLECTOR 1 POSITION	168	622	CH 1	2747
46	REFLECTOR 2 POSITION	16373	624	CH 2	2568
48	REFL 1 POS	174	626	CH 3	2753
50	REFL 2 POS	16375	628	2ND LOOK	2570
52	SCENE DATA	16153	630	CH 4	16124
54	CH 1	16187	632	CH 5	16172
56	CH 2	17324	634	CH 6	17322
58	CH 3	16711	636	CH 7	16711
60	CH 4	16560	638	CH 8	16560
62	CH 5	16312	640	CH 9	16302
64	CH 6	16373	642	CH 10	16370
66	CH 7	15901	644	CH 11	15900
68	CH 8	17146	646	CH 12	17148
70	CH 9	16919	648	CH 13	16924
72	CH 10	19668	650	CH 14	19688
74	CH 11	19668	652	CH 15	17600
76	CH 12	14761	654	CH 1	14761
78	REFLECTOR 1 POSITION	323	656	CH 2	2899
80	REFLECTOR 2 POSITION	143	658	CH 3	2718
82	REFL 1 POS	326	660	CH 4	2905
84	REFL 2 POS	149	662	2ND LOOK	2722
86	SCENE DATA	16121	664	CH 5	16126
88	CH 1	16175	666	CH 6	16176
90	CH 2	16718	668	CH 7	17316
92	CH 3	16712	670	CH 8	16708

AMSU A1_33 A1.EXE		DIGITAL A DATA		20-NOV-99		12:00:53		PAGE		2	
		FULL SCAN MODE									
ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH 7	16559	672	CH 7	16558						
96	CH 8	16304	674	CH 8	16307						
98	CH 9	16383	676	CH 9	16380						
100	CH 10	15907	678	CH 10	15900						
102	CH 11	17148	680	CH 11	17160						
104	CH 12	16928	682	CH 12	16920						
106	CH 13	19698	684	CH 13	19686						
108	CH 14	17591	686	CH 14	17604						
110	CH 15	14765	688	CH 15	17604						
112	REFLECTOR 1 POSITION 4	475	690	REFLECTOR 1 POSITION 21	3053						
114	REFLECTOR 2 POSITION 4	297	692	REFLECTOR 2 POSITION 21	2868						
116	REFL 1 POS 4	479	694	REFL 1 POS 21	3056						
118	REFL 2 POS 4	299	696	REFL 2 POS 21	2873						
120	SCENE DATA BP 4	16127	698	SCENE DATA BP 21	16129						
122	CH 3	16171	700	CH 3	16178						
124	CH 4	17315	702	CH 4	17320						
126	CH 5	16725	704	CH 5	16705						
128	CH 6	16565	706	CH 6	16557						
130	CH 7	16305	708	CH 7	16307						
132	CH 8	16383	710	CH 8	16376						
134	CH 9	15915	712	CH 9	15901						
136	CH 10	17160	714	CH 10	17151						
138	CH 11	16922	716	CH 11	16908						
140	CH 12	19686	718	CH 12	19683						
142	CH 13	17574	720	CH 13	17624						
144	CH 14	14767	722	CH 14	17624						
146	CH 15	625	724	CH 15	14761						
148	REFLECTOR 1 POSITION 5	444	726	REFLECTOR 1 POSITION 22	3202						
150	REFLECTOR 2 POSITION 5	632	728	REFLECTOR 2 POSITION 22	3021						
152	REFL 1 POS 5	448	730	REFL 1 POS 22	3206						
154	REFL 2 POS 5	448	732	REFL 2 POS 22	3027						
156	SCENE DATA BP 5	16114	734	SCENE DATA BP 22	16125						
158	CH 3	16177	736	CH 3	16173						
160	CH 4	17318	738	CH 4	17317						
162	CH 5	16723	740	CH 5	16706						
164	CH 6	16570	742	CH 6	16559						
166	CH 7	16304	744	CH 7	16307						
168	CH 8	16390	746	CH 8	16381						
170	CH 9	15924	748	CH 9	15902						
172	CH 10	17149	750	CH 10	17146						
174	CH 11	16932	752	CH 11	16918						
176	CH 12	19694	754	CH 12	19696						
178	CH 13	17633	756	CH 13	17607						
180	CH 14	14768	758	CH 14	14760						
182	CH 15	778	760	CH 15	3349						
184	REFLECTOR 1 POSITION 6	595	762	REFLECTOR 1 POSITION 23	3171						
186	REFLECTOR 2 POSITION 6	781	764	REFLECTOR 2 POSITION 23	3357						
188	REFL 1 POS 6	598	766	REFL 1 POS 23	3177						
190	REFL 2 POS 6	16122	768	REFL 2 POS 23	16128						
192	SCENE DATA BP 6	16176	770	SCENE DATA BP 23	16176						
	CH 3	17318		CH 3	17321						
	CH 4			CH 4							
	CH 5			CH 5							

FULL SCAN MODE

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16725	772	CH 6	16706
196	CH 7	16576	774	CH 7	16554
198	CH 8	16305	776	CH 8	16309
200	CH 9	16393	778	CH 9	16378
202	CH 10	15908	780	CH 10	15900
204	CH 11	17159	782	CH 11	17151
206	CH 12	16928	784	CH 12	16913
208	CH 13	19694	786	CH 13	19669
210	CH 14	17608	788	CH 14	17611
212	CH 15	14773	790	CH 15	14760
214	REFLECTOR 1 POSITION	929	792	REFLECTOR 1 POSITION	3503
216	REFLECTOR 2 POSITION	748	794	REFLECTOR 2 POSITION	3325
218	REFL 1 POS 7	933	796	REFL 1 POS 24	3509
220	REFL 2 POS 7	748	798	REFL 2 POS 24	3330
222	SCENE DATA BP 7	16130	800	SCENE DATA BP 24	16127
224	CH 3	16175	802	CH 3	16171
226	CH 4	17314	804	CH 4	17322
228	CH 5	16707	806	CH 5	16707
230	CH 6	16560	808	CH 6	16558
232	CH 7	16306	810	CH 7	16306
234	CH 8	16378	812	CH 8	16376
236	CH 9	15903	814	CH 9	15901
238	CH 10	17143	816	CH 10	17146
240	CH 11	16915	818	CH 11	16923
242	CH 12	19687	820	CH 12	19669
244	CH 13	17593	822	CH 13	17603
246	CH 14	14761	824	CH 14	14759
248	CH 15	1079	826	CH 15	3654
250	REFLECTOR 1 POSITION	898	828	REFLECTOR 1 POSITION	3475
252	REFLECTOR 2 POSITION	1085	830	REFLECTOR 2 POSITION	3475
254	REFL 1 POS 8	903	832	REFL 1 POS 25	3660
256	REFL 2 POS 8	16120	834	REFL 2 POS 25	3480
258	SCENE DATA BP 8	16173	836	SCENE DATA BP 25	16120
260	CH 3	16173	838	CH 3	16174
262	CH 4	17320	840	CH 4	17318
264	CH 5	16708	842	CH 5	16705
266	CH 6	16559	844	CH 6	16557
268	CH 7	16304	846	CH 7	16307
270	CH 8	16381	848	CH 8	16377
272	CH 9	15898	850	CH 9	15904
274	CH 10	17148	852	CH 10	17151
276	CH 11	16922	854	CH 11	16918
278	CH 12	19681	856	CH 12	19672
280	CH 13	17631	858	CH 13	17609
282	CH 14	14764	860	CH 14	14760
284	CH 15	1233	862	CH 15	3804
286	REFLECTOR 1 POSITION	1051	864	REFLECTOR 1 POSITION	3626
288	REFLECTOR 2 POSITION	1236	866	REFLECTOR 2 POSITION	3812
290	REFL 1 POS 9	1054	868	REFL 1 POS 26	3633
292	REFL 2 POS 9	16124	870	REFL 2 POS 26	16145
	SCENE DATA BP 9	16179		SCENE DATA BP 26	16181

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17327	872	REFLECTOR 1 POSITION 27	17322
296	CH 6	16707	874	REFLECTOR 2 POSITION 27	16708
298	CH 7	16557	876	REFL 1 POS 27	16558
300	CH 8	16307	878	REFL 2 POS 27	16309
302	CH 9	16376	880	SCENE DATA BP 27	16379
304	CH 10	15899	882		15898
306	CH 11	17148	884		17149
308	CH 12	16923	886		16926
310	CH 13	19672	888		19684
312	CH 14	17621	890		17615
314	CH 15	14762	892		14760
316	REFLECTOR 1 POSITION 10	13833	894		3969
318	REFLECTOR 2 POSITION 10	12033	896		3779
320	REFL 1 POS 10	1389	898		3971
322	REFL 2 POS 10	12035	900		3785
324	SCENE DATA BP 10	161178	902		16119
326	CH 3	16173	904		16181
328	CH 4	17323	906		17328
330	CH 5	16707	908		16705
332	CH 6	16559	910		16559
334	CH 7	16304	912		16308
336	CH 8	16378	914		16372
338	CH 9	15903	916		15903
340	CH 10	17148	918		17148
342	CH 11	16915	920		16919
344	CH 12	19703	922		19689
346	CH 13	17600	924		17628
348	CH 14	14761	926		14760
350	CH 15	1534	928		14111
352	REFLECTOR 1 POSITION 11	13555	930		3937
354	REFLECTOR 2 POSITION 11	13539	932		4114
356	REFL 1 POS 11	1356	934		3936
358	REFL 2 POS 11	16110	936		16108
360	SCENE DATA BP 11	16176	938		16186
362	CH 3	17325	940		17324
364	CH 4	16707	942		16710
366	CH 5	16556	944		16559
368	CH 6	16307	946		16302
370	CH 7	16381	948		16374
372	CH 8	15906	950		15900
374	CH 9	17151	952		17145
376	CH 10	16914	954		16914
378	CH 11	19689	956		19672
380	CH 12	17618	958		17596
382	CH 13	14761	960		14760
384	CH 14	1687	962		4260
386	CH 15	1507	964		4084
388	REFLECTOR 1 POSITION 12	1591	966		4267
390	REFLECTOR 2 POSITION 12	1508	968		4087
392	REFL 1 POS 12	16141	970		16087
	REFL 2 POS 12				
	SCENE DATA BP 12				
	CH 3				

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16175	972	CH 4	16212
396	CH 5	17324	974	CH 5	17361
398	CH 6	16707	976	CH 6	16706
400	CH 7	16558	978	CH 7	16561
402	CH 8	16306	980	CH 8	16355
404	CH 9	16373	982	CH 9	16376
406	CH 10	15904	984	CH 10	15903
408	CH 11	17151	986	CH 11	17145
410	CH 12	16912	988	CH 12	16917
412	CH 13	19693	990	CH 13	19676
414	CH 14	17614	992	CH 14	17588
416	CH 15	14762	994	CH 15	14761
418	REFLECTOR 1 POSITION 13	1838	996	REFLECTOR 1 POSITION 30	4420
420	REFLECTOR 2 POSITION 13	1657	998	REFLECTOR 2 POSITION 30	4236
422	REFL 1 POS 13	1843	1000	REFL 1 POS 30	4422
424	REFL 2 POS 13	1660	1002	REFL 2 POS 30	4240
426	SCENE DATA BP 13	16116	1004	SCENE DATA BP 30	16149
428	CH 3	16187	1006	CH 3	16192
430	CH 4	16733	1008	CH 4	17327
432	CH 5	16576	1010	CH 5	16708
434	CH 6	16322	1012	CH 6	16561
436	CH 7	16395	1014	CH 7	16315
438	CH 8	15906	1016	CH 8	16371
440	CH 9	17170	1018	CH 9	15902
442	CH 10	16935	1020	CH 10	17154
444	CH 11	19707	1022	CH 11	16907
446	CH 12	17603	1024	CH 12	19679
448	CH 13	14771	1026	CH 13	17625
450	CH 14	1990	1028	CH 14	14760
452	CH 15	1808	1030	CH 15	6017
454	REFLECTOR 1 POSITION 14	1895	1032	REFLECTOR 1 COLD CAL POS	5833
456	REFLECTOR 2 POSITION 14	1995	1034	REFLECTOR 2 COLD CAL POS	6017
458	REFL 1 POS 14	1812	1036	REFL 1 COLD CAL 2ND LOOK	5833
460	REFL 2 POS 14	16115	1038	REFL 2 COLD CAL 2ND LOOK	16168
462	SCENE DATA BP 14	16183	1040	COLD CAL DATA 1	16186
464	CH 3	17336	1042	CH 3	17326
466	CH 4	16723	1044	CH 4	16704
468	CH 5	16574	1046	CH 5	16561
470	CH 6	16306	1048	CH 6	16324
472	CH 7	16391	1050	CH 7	16373
474	CH 8	15934	1052	CH 8	15906
476	CH 9	17159	1054	CH 9	17150
478	CH 10	16930	1056	CH 10	16914
480	CH 11	19700	1058	CH 11	19670
482	CH 12	17625	1060	CH 12	17601
484	CH 13	14771	1062	CH 13	14761
486	CH 14	2143	1064	CH 14	16168
488	CH 15	1963	1066	CH 15	16187
490	REFLECTOR 1 POSITION 15	2147	1068	REFLECTOR 2 POSITION 15	17326
492	REFLECTOR 2 POSITION 15	1963	1070	REFL 1 POS 15	16705
	REFL 2 POS 15			REFL 2 POS 15	
	SCENE DATA BP 15			SCENE DATA BP 15	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	
	CH 7			CH 7	
	CH 8			CH 8	
	CH 9			CH 9	
	CH 10			CH 10	
	CH 11			CH 11	
	CH 12			CH 12	
	CH 13			CH 13	
	CH 14			CH 14	
	CH 15			CH 15	
	REFLECTOR 1 POSITION 15			REFLECTOR 1 POSITION 15	
	REFLECTOR 2 POSITION 15			REFLECTOR 2 POSITION 15	
	REFL 1 POS 15			REFL 1 POS 15	
	REFL 2 POS 15			REFL 2 POS 15	
	SCENE DATA BP 15			SCENE DATA BP 15	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	
	CH 7			CH 7	
	CH 8			CH 8	
	CH 9			CH 9	
	CH 10			CH 10	
	CH 11			CH 11	
	CH 12			CH 12	
	CH 13			CH 13	
	CH 14			CH 14	
	CH 15			CH 15	
	REFLECTOR 1 POSITION 15			REFLECTOR 1 POSITION 15	
	REFLECTOR 2 POSITION 15			REFLECTOR 2 POSITION 15	
	REFL 1 POS 15			REFL 1 POS 15	
	REFL 2 POS 15			REFL 2 POS 15	
	SCENE DATA BP 15			SCENE DATA BP 15	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	
	CH 7			CH 7	
	CH 8			CH 8	
	CH 9			CH 9	
	CH 10			CH 10	
	CH 11			CH 11	
	CH 12			CH 12	
	CH 13			CH 13	
	CH 14			CH 14	
	CH 15			CH 15	
	REFLECTOR 1 POSITION 15			REFLECTOR 1 POSITION 15	
	REFLECTOR 2 POSITION 15			REFLECTOR 2 POSITION 15	
	REFL 1 POS 15			REFL 1 POS 15	
	REFL 2 POS 15			REFL 2 POS 15	
	SCENE DATA BP 15			SCENE DATA BP 15	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	
	CH 7			CH 7	
	CH 8			CH 8	
	CH 9			CH 9	
	CH 10			CH 10	
	CH 11			CH 11	
	CH 12			CH 12	
	CH 13			CH 13	
	CH 14			CH 14	
	CH 15			CH 15	
	REFLECTOR 1 POSITION 15			REFLECTOR 1 POSITION 15	
	REFLECTOR 2 POSITION 15			REFLECTOR 2 POSITION 15	
	REFL 1 POS 15			REFL 1 POS 15	
	REFL 2 POS 15			REFL 2 POS 15	
	SCENE DATA BP 15			SCENE DATA BP 15	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	
	CH 7			CH 7	
	CH 8			CH 8	
	CH 9			CH 9	
	CH 10			CH 10	
	CH 11			CH 11	
	CH 12			CH 12	
	CH 13			CH 13	
	CH 14			CH 14	
	CH 15			CH 15	
	REFLECTOR 1 POSITION 15			REFLECTOR 1 POSITION 15	
	REFLECTOR 2 POSITION 15			REFLECTOR 2 POSITION 15	
	REFL 1 POS 15			REFL 1 POS 15	
	REFL 2 POS 15			REFL 2 POS 15	
	SCENE DATA BP 15			SCENE DATA BP 15	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	
	CH 7			CH 7	
	CH 8			CH 8	
	CH 9			CH 9	
	CH 10			CH 10	
	CH 11			CH 11	
	CH 12			CH 12	
	CH 13			CH 13	
	CH 14			CH 14	
	CH 15			CH 15	
	REFLECTOR 1 POSITION 15			REFLECTOR 1 POSITION 15	
	REFLECTOR 2 POSITION 15			REFLECTOR 2 POSITION 15	
	REFL 1 POS 15			REFL 1 POS 15	
	REFL 2 POS 15			REFL 2 POS 15	
	SCENE DATA BP 15			SCENE DATA BP 15	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	
	CH 7			CH 7	
	CH 8			CH 8	
	CH 9			CH 9	
	CH 10			CH 10	
	CH 11			CH 11	
	CH 12			CH 12	
	CH 13			CH 13	
	CH 14			CH 14	
	CH 15			CH 15	
	REFLECTOR 1 POSITION 15			REFLECTOR 1 POSITION 15	
	REFLECTOR 2 POSITION 15			REFLECTOR 2 POSITION 15	
	REFL 1 POS 15			REFL 1 POS 15	
	REFL 2 POS 15			REFL 2 POS 15	
	SCENE DATA BP 15			SCENE DATA BP 15	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	
	CH 7			CH 7	
	CH 8			CH 8	
	CH 9			CH 9	
	CH 10			CH 10	
	CH 11			CH 11	
	CH 12			CH 12	
	CH 13			CH 13	
	CH 14			CH 14	
	CH 15			CH 15	
	REFLECTOR 1 POSITION 15			REFLECTOR 1 POSITION 15	
	REFLECTOR 2 POSITION 15			REFLECTOR 2 POSITION 15	
	REFL 1 POS 15			REFL 1 POS 15	
	REFL 2 POS 15			REFL 2 POS 15	
	SCENE DATA BP 15			SCENE DATA BP 15	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	
	CH 7			CH 7	
	CH 8			CH 8	
	CH 9			CH 9	
	CH 10			CH 10	
	CH 11			CH 11	
	CH 12			CH 12	
	CH 13			CH 13	
	CH 14			CH 14	
	CH 15			CH 15	
	REFLECTOR 1 POSITION 15			REFLECTOR 1 POSITION 15	
	REFLECTOR 2 POSITION 15			REFLECTOR 2 POSITION 15	
	REFL 1 POS 15			REFL 1 POS 15	
	REFL 2 POS 15			REFL 2 POS 15	
	SCENE DATA BP 15			SCENE DATA BP 15	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	
	CH 7			CH 7	
	CH 8			CH 8	
	CH 9			CH 9	
	CH 10			CH 10	
	CH 11			CH 11	
	CH 12			CH 12	
	CH 13			CH 13	
	CH 14			CH 14	
	CH 15			CH 15	
	REFLECTOR 1 POSITION 15			REFLECTOR 1 POSITION 15	
	REFLECTOR 2 POSITION 15			REFLECTOR 2 POSITION 15	
	REFL 1 POS 15			REFL 1 POS 15	
	REFL 2 POS 15			REFL 2 POS 15	
	SCENE DATA BP 15			SCENE DATA BP 15	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	
	CH 7			CH 7	
	CH 8			CH 8	
	CH 9			CH 9	
	CH 10			CH 10	
	CH 11			CH 11	
	CH 12			CH 12	
	CH 13			CH 13	
	CH 14			CH 14	
	CH 15			CH 15	
	REFLECTOR 1 POSITION 15			REFLECTOR 1 POSITION 15	
	REFLECTOR 2 POSITION 15			REFLECTOR 2 POSITION 15	
	REFL 1 POS 15			REFL 1 POS 15	
	REFL 2 POS 15			REFL 2 POS 15	
	SCENE DATA BP 15			SCENE DATA BP 15	
	CH 3			CH 3	
	CH 4			CH 4	
	CH 5			CH 5	
	CH 6			CH 6	
	CH 7			CH 7	
	CH 8			CH 8	
	CH 9			CH 9	
	CH 10			CH 10	
	CH 11			CH 11	
	CH 12			CH 12	
	CH 13			CH 13	
	CH 14			CH 14	
	CH 15			CH 15	
	REFLECTOR 1 POSITION 15			REFLECTOR 1 POSITION 15	
	REFLECTOR 2 POSITION 15			REFLECTOR 2 POSITION 15	
	REFL 1 POS 15			REFL 1 POS 15	
	REFL 2 POS 15			REFL 2 POS 15	
	SCENE DATA BP 15			SCENE DATA BP 15	
	CH 3			CH 3	
	CH 4			CH 4	
	CH				

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
494	SCENE DATA BP 15	16140	1072		16559
496		16195	1074		16326
498		17335	1076		16375
500		16726	1078		15902
502		16589	1080		17149
504		16315	1082		16910
506		16400	1084		19688
508		15910	1086		17613
510		17167	1088		14761
512		16931	1182	REFLECTOR 1 WARM CAL POS	10416
514		19685	1184	REFLECTOR 2 WARM CAL POS	10232
516		17607	1186	REFL 1 WARM CAL 2ND LOOK	10416
518		14773	1188	REFL 2 WARM CAL 2ND LOOK	10232
520	REFLECTOR 1 POSITION 16	2294	1190	WARM CAL DATA 1	16126
522	REFLECTOR 2 POSITION 16	2113	1192		16173
524	REFL 1 POS 16 2ND LOOK	2299	1194		17319
526	REFL 2 POS 16 2ND LOOK	2115	1196		16698
528	SCENE DATA BP 16	16181	1198		16550
530		16211	1200		16307
532		17342	1202		16371
534		16725	1204		15894
536		16577	1206		17142
538		16327	1208		16912
540		16392	1210		19683
542		15904	1212		17595
544		17170	1214		14758
546		16924	1216		16119
548		19676	1218		16173
550		17600	1220		17321
552		14767	1222		16700
554	REFLECTOR 1 POSITION 17	2444	1224		16552
556	REFLECTOR 2 POSITION 17	2261	1226		16304
558	REFL 1 POS 17 2ND LOOK	2449	1228		16371
560	REFL 2 POS 17 2ND LOOK	2265	1230		15895
562	SCENE DATA BP 17	16130	1232		17141
564		16184	1234		16915
566		17343	1236		19655
568		16724	1238		17609
570		16572	1240		14759

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
1090	SCAN MOTOR A1-1	17971	23.51	
1092	SCAN MOTOR A1-2	18754	23.82	
1094	FEEDHORN A1-1	19341	25.56	
1096	FEEDHORN A1-2	19976	26.79	
1098	RF MUX A1-1	20731	27.75	
1100	RF MUX A1-2	21436	29.12	
1102	LOCAL OSCILLATOR CHANNEL 3	22534	31.16	
1104	LOCAL OSCILLATOR CHANNEL 4	22545	30.86	
1106	LOCAL OSCILLATOR CHANNEL 5	22136	30.60	
1108	LOCAL OSCILLATOR CHANNEL 6	20523	27.71	
1110	LOCAL OSCILLATOR CHANNEL 7	21158	28.71	
1112	LOCAL OSCILLATOR CHANNEL 8	21583	30.45	
1114	LOCAL OSCILLATOR CHANNEL 15	22351	30.45	
1116	PLL LO #2 CHANNELS 9 THROUGH 14	20403	27.16	
1118	PLL LO #1 CHANNELS 9 THROUGH 14	23541	33.16	
1120	SPARE (NOT USED)	32767	51.27	
1122	MIXER/IF AMPLIFIER CHANNEL 3	22107	29.52	
1124	MIXER/IF AMPLIFIER CHANNEL 4	22137	29.79	
1126	MIXER/IF AMPLIFIER CHANNEL 5	21781	29.49	
1128	MIXER/IF AMPLIFIER CHANNEL 6	20916	28.18	
1130	MIXER/IF AMPLIFIER CHANNEL 7	21003	28.59	
1132	MIXER/IF AMPLIFIER CHANNEL 8	21968	28.79	
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20880	27.62	
1136	MIXER/IF AMPLIFIER CHANNEL 15	21773	30.29	
1138	IF AMPLIFIER CHANNEL 11 THRU 14	21807	29.95	
1140	IF AMPLIFIER CHANNEL 9	21833	30.06	
1142	IF AMPLIFIER CHANNEL 10	21996	30.06	
1144	IF AMPLIFIER CHANNEL 11	20653	27.79	
1146	DC/DC CONVERTER	22406	31.01	
1148	IF AMPLIFIER CHANNEL 13	20670	27.80	
1150	IF AMPLIFIER CHANNEL 14	20776	28.10	
1152	IF AMPLIFIER CHANNEL 12	20567	27.71	
1154	RF SHELF A1-1	20697	28.81	
1156	RF SHELF A1-2	21293	29.12	
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	19550	26.00	
1160	A1-1 WARM LOAD 1	23637	23.60	
1162	A1-1 WARM LOAD 2	23384	23.52	
1164	A1-1 WARM LOAD 3	23619	23.61	
1166	A1-1 WARM LOAD 4	23550	23.56	
1168	A1-1 WARM LOAD CENTER	23642	23.71	
1170	A1-2 WARM LOAD 1	23894	24.51	
1172	A1-2 WARM LOAD 2	24045	24.45	
1174	A1-2 WARM LOAD 3	24205	24.57	
1176	A1-2 WARM LOAD 4	23985	24.60	
1178	A1-2 WARM LOAD CENTER	23875	24.49	
1180	TEMP SENSOR REFERENCE VOLTAGE	25324		

DESCRIPTION

STATUS

STATUS

STATUS

SCANNER A1-1 POWER
 SCANNER A1-2 POWER
 PLL POWER
 ANTENNA IN WARM CAL POSITION MODE
 ANTENNA IN COLD CAL POSITION MODE
 ANTENNA IN NADIR POSITION MODE
 ANTENNA IN FULL SCAN MODE
 SURVIVAL HEATER POWER
 MODULE POWER
 COLD CAL POSITION MSB
 COLD CAL POSITION LSB

ON
 ON
 ON
 PLLO # 1
 NO
 NO
 NO
 NO
 YES
 YES
 OFF
 OFF
 CONNECT
 ZERO
 ZERO

ON
 ON
 ON
 PLLO # 1
 NO
 NO
 NO
 NO
 YES
 YES
 OFF
 OFF
 CONNECT
 ZERO
 ZERO

ON
 ON
 ON
 PLLO # 1
 NO
 NO
 NO
 NO
 YES
 YES
 OFF
 OFF
 CONNECT
 ZERO
 ZERO

ON
 ON
 ON
 PLLO # 1
 NO
 NO
 NO
 NO
 YES
 YES
 OFF
 OFF
 CONNECT
 ZERO
 ZERO

ANALOG DATA
DESCRIPTION

VALUE

DEG C

VALUE

DEG C

VALUE

DEG C

A1-1 SCANNER MOTOR TEMPERATURE
 A1-2 SCANNER MOTOR TEMPERATURE
 A1-1 RF SHELF TEMPERATURE
 A1-2 RF SHELF TEMPERATURE
 A1-1 WARM LOAD TEMPERATURE
 A1-2 WARM LOAD TEMPERATURE

DESCRIPTION

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

VALUE

AMPS/
VOLTS

A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)
 A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)
 SIGNAL PROCESSING +15 VDC
 ANTENNA DRIVE +15 VDC
 SIGNAL PROCESSING -15 VDC
 ANTENNA DRIVE -15 VDC
 RECEIVER AMPLIFIER +8 VDC
 SIGNAL PROCESSOR +5 VDC
 ANTENNA DRIVE +5 VDC
 RECEIVER MIXER/IF +10 VDC
 PHASE LOCK LOOP (CHANNEL 9/14) +15 VDC
 PHASE LOCK LOOP (CHANNEL 9/14) -15 VDC
 L.O. VOLTAGE (CHANNEL 8)
 L.O. VOLTAGE (CHANNEL 7)
 L.O. VOLTAGE (CHANNEL 6)
 L.O. VOLTAGE (CHANNEL 3)
 L.O. VOLTAGE (CHANNEL 4)
 L.O. VOLTAGE (CHANNEL 5)
 PLLO # 2 LOCK DETECT
 PLLO # 1 LOCK DETECT
 L.O. VOLTAGE (CHANNEL 15)

VDC

VDC

VDC

VDC

VDC

VDC

PRT TEMPERATURES

VARIABLE TARGET

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
615	42.00	601	14.00
616	43.00	602	15.00
617	44.00	603	16.00
618	45.00	604	17.00
619	46.00	605	18.00
620	47.00	606	19.00
621	48.00	607	20.00
622	49.00	608	21.00
623	50.00	609	22.00
624	51.00	610	23.00
625	52.00	611	24.00
626	53.00	612	25.00
627	67.00	613	69.00
628	68.00	614	70.00
629	71.00	630	72.00
631	26.00	632	27.00

FIXED TARGET

BASEPLATE

THERMOCOUPLE TEMPERATURES

FIXED TARGET SHROUD

VARIABLE TARGET SHROUD

FIXED TARGET N2

VARIABLE TARGET N2

HEATER N2

FIXED TARGET FLOW METER

VARIABLE TARGET FLOW METER

BASEPLATE HEATER N2

BASEPLATE N2

BASEPLATE FLOW METER

ADJUNCT RADIATORS

A1-1		A1-2	
NO.	DEG K	NO.	DEG K
558	5.00	537	34.00
559	6.00	538	35.00
550	7.00	524	36.00
551	8.00	525	37.00
506	57.00	502	30.00
507	58.00	503	31.00
516	59.00	511	32.00
517	60.00	512	33.00
514	1.00	509	38.00
515	2.00	510	39.00
508	63.00	504	61.00
518	64.00	513	62.00
519	3.00	520	4.00
521	9.00	522	10.00
523	65.00		
575	73.00	577	74.00
579	75.00	581	76.00

AMSU A1-33 A1.EXE FULL SCAN MODE P1 20-NOV-99 12:03:06 SCAN NUMBER 83
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

COMMANDS
[9] MODULE POWER = CONNECT ANTENNA IN COLD CAL POSIT = NO [15]
[10] SURVIVAL HEATER POWER = OFF ANTENNA IN NADIR POSITION = NO [16]
[11] MODULE TOTALLY OFF = ON ANTENNA IN FULL SCAN MODE = YES [17]
[12] SCANNER A1 - 1 POWER = ON PLL POWER = PLLO # 1 [18]
[13] SCANNER A1 - 2 POWER = ON COLD CAL POSITION MSB = ZERO [19]
[14] ANTENNA IN WARM CAL POSIT = NO COLD CAL POSITION LSB = ZERO [20]
POWER [4] ON
SELECT TOUCHSCREEN BUTTON 3 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

ATB HIGH FREQ. TRANSIENTS 6.67Hz

3.2.4.2.3.3.2

POST INJECTION

TDS 51

S/O: 748613 OP: 0810 1ST CPT
P/N: 1331720-3-IT SN: 109

TEST ENG: (139/T) DATE: 11/20/99

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
1	SYNC SEQUENCE	11111111	572	SCENE DATA	16324
2	SYNC SEQUENCE	11111111	574	BP	16390
3	SYNC SEQUENCE	11111111	576		15925
4	UNIT ID AND SERIAL NO	00100001	578		17156
5	DIGITAL B DATA	00000010	580		16928
6	DIGITAL B DATA	00001110	582		19680
7	DIGITAL B DATA	00000000	584		17603
8	DIGITAL B DATA	00000000	586		14753
10	REFLECTOR 1 POSITION	16225	588	REFLECTOR 1 POSITION	2598
12	REFLECTOR 2 POSITION	24	590	REFLECTOR 2 POSITION	2417
14	REFL 1 POS	16224	592	REFL 1 POS	2602
16	REFL 2 POS	16144	594	REFL 2 POS	2419
18	SCENE DATA	16183	596	SCENE DATA	16129
20		17324	598		16180
22		16702	600		17339
24		16550	602		16722
26		16328	604		16573
28		16372	606		16335
30		15894	608		16383
32		17141	610		15896
34		16905	612		17155
36		19672	614		16911
38		17590	616		19660
40		14744	618		17586
42		167	620		14756
44	REFLECTOR 1 POSITION	16371	622	REFLECTOR 1 POSITION	2747
46	REFLECTOR 2 POSITION	174	624	REFLECTOR 2 POSITION	2567
48	REFL 1 POS	16375	626	REFL 1 POS	2752
50	REFL 2 POS	16178	628	REFL 2 POS	2570
52	SCENE DATA	16152	630	SCENE DATA	16120
54		17318	632		16167
56		16699	634		17316
58		16554	636		16699
60		16311	638		16553
62		16371	640		16375
64		15893	642		16375
66		17138	644		15898
68		16908	646		17140
70		19680	648		16917
72		17604	650		19654
74		14744	652		17588
76		323	654		14744
78	REFLECTOR 1 POSITION	143	656	REFLECTOR 1 POSITION	2898
80	REFLECTOR 2 POSITION	326	658	REFLECTOR 2 POSITION	2717
82	REFL 1 POS	147	660	REFL 1 POS	2905
84	REFL 2 POS	16117	662	REFL 2 POS	2722
86	SCENE DATA	16165	664	SCENE DATA	16126
88		17316	666		16166
90		16705	668		17312
92			670		16699

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
94	CH	16557	672	CH	16549
96	CH	16300	674	CH	16306
98	CH	16370	676	CH	16373
100	CH	15901	678	CH	15890
102	CH	17140	680	CH	17142
104	CH	16910	682	CH	16914
106	CH	19674	684	CH	19666
108	CH	17582	686	CH	17593
110	CH	14747	688	CH	14744
112	REFLECTOR 1 POSITION	474	690	REFLECTOR 1 POSITION	3052
114	REFLECTOR 2 POSITION	297	692	REFLECTOR 2 POSITION	2868
116	REFL 1 POS	478	694	REFL 1 POS	3057
118	REFL 2 POS	299	696	REFL 2 POS	2874
120	SCENE DATA	16117	700	SCENE DATA	16124
122	CH	16169	702	CH	16168
124	CH	17309	704	CH	17308
126	CH	16716	706	CH	16699
128	CH	16558	708	CH	16550
130	CH	16302	710	CH	16304
132	CH	16380	712	CH	16373
134	CH	15913	714	CH	15890
136	CH	17149	716	CH	17142
138	CH	16910	718	CH	16902
140	CH	19666	720	CH	19671
142	CH	17596	722	CH	17603
144	CH	14749	724	CH	14744
146	REFLECTOR 1 POSITION	625	726	REFLECTOR 1 POSITION	3201
148	REFLECTOR 2 POSITION	443	728	REFLECTOR 2 POSITION	3023
150	REFL 1 POS	631	730	REFL 1 POS	3206
152	REFL 2 POS	448	732	REFL 2 POS	3028
154	SCENE DATA	16118	734	SCENE DATA	16122
156	CH	16169	736	CH	16170
158	CH	17314	738	CH	17306
160	CH	16716	740	CH	16701
162	CH	16568	742	CH	16550
164	CH	16304	744	CH	16303
166	CH	16381	746	CH	16370
168	CH	15909	748	CH	15897
170	CH	16909	750	CH	17138
172	CH	17134	752	CH	16905
174	CH	19674	754	CH	19665
176	CH	17614	756	CH	19662
178	CH	14751	758	CH	14741
180	REFLECTOR 1 POSITION	777	760	REFLECTOR 1 POSITION	3350
182	REFLECTOR 2 POSITION	595	762	REFLECTOR 2 POSITION	3171
184	REFL 1 POS	582	764	REFL 1 POS	3357
186	REFL 2 POS	598	766	REFL 2 POS	3178
188	SCENE DATA	16119	768	SCENE DATA	16124
190	CH	16165	770	CH	16165
192	CH	17309		CH	17311

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
194	CH 6	16718	772	CH 6	16700
196	CH 7	16568	774	CH 7	16550
198	CH 8	16305	776	CH 8	16301
200	CH 9	16386	778	CH 9	16368
202	CH 10	15904	780	CH 10	15891
204	CH 11	17150	782	CH 11	17136
206	CH 12	16914	784	CH 12	16894
208	CH 13	19657	786	CH 13	19666
210	CH 14	17596	788	CH 14	17568
212	CH 15	14755	790	CH 15	14743
214	REFLECTOR 1 POSITION	929	792	REFLECTOR 1 POSITION 24	3504
216	REFLECTOR 2 POSITION	748	794	REFLECTOR 2 POSITION 24	3326
218	REFL 1 POS 7	933	796	REFL 1 POS 24 2ND LOOK	3509
220	REFL 2 POS 7	748	798	REFL 2 POS 24 2ND LOOK	3329
222	SCENE DATA BP 7	16130	800	SCENE DATA BP 24	16116
224	CH 3	16168	802	CH 3	16170
226	CH 4	17307	804	CH 4	17310
228	CH 5	16702	806	CH 5	16699
230	CH 6	16552	808	CH 6	16553
232	CH 7	16299	810	CH 7	16299
234	CH 8	16369	812	CH 8	16368
236	CH 9	15896	814	CH 9	15896
238	CH 10	17139	816	CH 10	17134
240	CH 11	16906	818	CH 11	16910
242	CH 12	19649	820	CH 12	19663
244	CH 13	17592	822	CH 13	17591
246	CH 14	14744	824	CH 14	14743
248	CH 15	11079	826	CH 15	3654
250	REFLECTOR 1 POSITION	899	828	REFLECTOR 1 POSITION 25	3475
252	REFLECTOR 2 POSITION	1084	830	REFLECTOR 2 POSITION 25	3660
254	REFL 1 POS 8	902	832	REFL 1 POS 25 2ND LOOK	3480
256	REFL 2 POS 8	16114	834	REFL 2 POS 25 2ND LOOK	16112
258	SCENE DATA BP 8	16170	836	SCENE DATA BP 25	16168
260	CH 3	17319	838	CH 3	17313
262	CH 4	16700	840	CH 4	16699
264	CH 5	16552	842	CH 5	16551
266	CH 6	16303	844	CH 6	16305
268	CH 7	16372	846	CH 7	16371
270	CH 8	15895	848	CH 8	15894
272	CH 9	17126	850	CH 9	17135
274	CH 10	16912	852	CH 10	16906
276	CH 11	19663	854	CH 11	19658
278	CH 12	17595	856	CH 12	17577
280	CH 13	14744	858	CH 13	14744
282	CH 14	12333	860	CH 14	3805
284	CH 15	10522	862	CH 15	3626
286	REFLECTOR 1 POSITION	1236	864	REFLECTOR 1 POSITION 26	3812
288	REFLECTOR 2 POSITION	1054	866	REFLECTOR 2 POSITION 26	3632
290	REFL 1 POS 9	16126	868	REFL 1 POS 26 2ND LOOK	16134
292	REFL 2 POS 9	16174	870	REFL 2 POS 26 2ND LOOK	16175
	SCENE DATA BP 9			SCENE DATA BP 26	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
294	CH 5	17319	872	CH 5	17313
296	CH 6	16700	874	CH 6	16698
298	CH 7	16551	876	CH 7	16552
300	CH 8	16303	878	CH 8	16307
302	CH 9	16376	880	CH 9	16370
304	CH 10	15894	882	CH 10	15897
306	CH 11	17129	884	CH 11	17135
308	CH 12	16906	886	CH 12	16902
310	CH 13	19671	888	CH 13	19654
312	CH 14	17605	890	CH 14	17587
314	CH 15	14744	892	CH 15	14743
316	REFLECTOR 1 POSITION 10	1385	894	REFLECTOR 1 POSITION 27	3971
318	REFLECTOR 2 POSITION 10	1203	896	REFLECTOR 2 POSITION 27	3782
320	REFL 1 POS 10 2ND LOOK	1389	898	REFL 1 POS 27 2ND LOOK	3971
322	REFL 2 POS 10 2ND LOOK	1205	900	REFL 2 POS 27 2ND LOOK	3785
324	SCENE DATA BP 10	16128	902	SCENE DATA BP 27	16117
326	CH 3	16170	904	CH 3	16175
328	CH 4	17310	906	CH 4	17322
330	CH 5	16698	908	CH 5	16697
332	CH 6	16551	910	CH 6	16552
334	CH 7	16303	912	CH 7	16304
336	CH 8	16368	914	CH 8	16367
338	CH 9	15892	916	CH 9	15892
340	CH 10	17139	918	CH 10	17136
342	CH 11	16906	920	CH 11	16909
344	CH 12	19658	922	CH 12	19671
346	CH 13	17571	924	CH 13	17586
348	CH 14	14743	926	CH 14	14742
350	CH 15	1534	928	CH 15	4110
352	REFLECTOR 1 POSITION 11	1355	930	REFLECTOR 1 POSITION 28	3936
354	REFLECTOR 2 POSITION 11	1540	932	REFLECTOR 2 POSITION 28	4114
356	REFL 1 POS 11 2ND LOOK	1357	934	REFL 1 POS 28 2ND LOOK	3936
358	REFL 2 POS 11 2ND LOOK	16104	936	REFL 2 POS 28 2ND LOOK	16109
360	SCENE DATA BP 11	16173	938	SCENE DATA BP 28	16173
362	CH 3	17318	940	CH 3	17318
364	CH 4	16699	942	CH 4	16695
366	CH 5	16546	944	CH 5	16547
368	CH 6	16308	946	CH 6	16302
370	CH 7	16374	948	CH 7	16366
372	CH 8	15898	950	CH 8	15892
374	CH 9	17139	952	CH 9	17143
376	CH 10	16907	954	CH 10	16906
378	CH 11	19658	956	CH 11	19657
380	CH 12	17564	958	CH 12	17589
382	CH 13	14744	960	CH 13	14743
384	CH 14	1687	962	CH 14	4260
386	CH 15	1507	964	CH 15	4083
388	REFLECTOR 1 POSITION 12	1691	966	REFLECTOR 1 POSITION 29	4267
390	REFLECTOR 2 POSITION 12	1509	968	REFLECTOR 2 POSITION 29	4087
392	REFL 1 POS 12 2ND LOOK	16135	970	REFL 1 POS 29 2ND LOOK	16084
	REFL 2 POS 12 2ND LOOK			REFL 2 POS 29 2ND LOOK	
	SCENE DATA BP 12			SCENE DATA BP 29	
	CH 3			CH 3	

ELEMENT	DESCRIPTION	VALUE	ELEMENT	DESCRIPTION	VALUE
394	CH 4	16172	972	REFLECTOR 1 POSITION 30	16204
396	CH 5	17311	974	REFLECTOR 2 POSITION 30	17353
398	CH 6	16696	976	REFL 1 POS 30 2ND LOOK	16697
400	CH 7	16552	978	REFL 2 POS 30 2ND LOOK	16553
402	CH 8	16306	980	SCENE DATA BP 30	16352
404	CH 9	16374	982	CH 3	16367
406	CH 10	15894	984	CH 4	15893
408	CH 11	17133	986	CH 5	17137
410	CH 12	16903	988	CH 6	16908
412	CH 13	19671	990	CH 7	19665
414	CH 14	17574	992	CH 8	17573
416	CH 15	14743	994	CH 9	14743
418	REFLECTOR 1 POSITION 13	1840	996	CH 10	4419
420	REFLECTOR 2 POSITION 13	1657	998	CH 11	4236
422	REFL 1 POS 13 2ND LOOK	1843	1000	CH 12	4232
424	REFL 2 POS 13 2ND LOOK	1660	1002	CH 13	4239
426	SCENE DATA BP 13	16112	1004	CH 14	16150
428	CH 3	16177	1006	CH 15	16183
430	CH 4	17325	1008	CH 30	17327
432	CH 5	16723	1010	CH 30	16698
434	CH 6	16569	1012	CH 30	16550
436	CH 7	16320	1014	CH 30	16312
438	CH 8	16387	1016	CH 30	16369
440	CH 9	15902	1018	CH 30	15893
442	CH 10	17158	1020	CH 30	17132
444	CH 11	16908	1022	CH 30	16897
446	CH 12	19676	1024	CH 30	19660
448	CH 13	17605	1026	CH 30	17586
450	CH 14	14754	1028	CH 30	14742
452	CH 15	1990	1030	REFLECTOR 1 COLD CAL POS	6016
454	REFLECTOR 1 POSITION 14	1809	1032	REFLECTOR 2 COLD CAL POS	5833
456	REFL 1 POS 14 2ND LOOK	1994	1034	REFL 1 COLD CAL 2ND LOOK	6017
458	REFL 2 POS 14 2ND LOOK	1812	1036	REFL 2 COLD CAL 2ND LOOK	5833
460	SCENE DATA BP 14	16112	1038	COLD CAL DATA 1	16164
462	CH 3	16173	1040	CH 3	16180
464	CH 4	17329	1042	CH 4	17318
466	CH 5	16717	1044	CH 5	16696
468	CH 6	16570	1046	CH 6	16551
470	CH 7	16301	1048	CH 7	16323
472	CH 8	16384	1050	CH 8	16365
474	CH 9	15926	1052	CH 9	15897
476	CH 10	17147	1054	CH 10	17133
478	CH 11	16912	1056	CH 11	16907
480	CH 12	19678	1058	CH 12	19657
482	CH 13	17601	1060	CH 13	17591
484	CH 14	14753	1062	CH 14	14742
486	CH 15	2144	1064	CH 15	16160
488	REFLECTOR 1 POSITION 15	1961	1066	CH 3	16180
490	REFLECTOR 2 POSITION 15	2146	1068	CH 4	17317
492	REFL 1 POS 15 2ND LOOK	1964	1070	CH 5	16696
	REFL 2 POS 15 2ND LOOK			CH 6	

ELEMENT	DESCRIPTION	VALUE	TEMPERATURE	DEG C
1090	SCAN MOTOR A1-1	17992	23.55	
1092	SCAN MOTOR A1-2	18770	23.85	
1094	FEEDHORN A1-1	19378	25.63	
1096	FEEDHORN A1-2	20032	26.90	
1098	RF MUX A1-1	20790	27.86	
1100	RF MUX A1-2	21517	29.27	
1102	LOCAL OSCILLATOR CHANNEL 3	22616	31.32	
1104	LOCAL OSCILLATOR CHANNEL 4	22628	31.02	
1106	LOCAL OSCILLATOR CHANNEL 5	22207	30.73	
1108	LOCAL OSCILLATOR CHANNEL 6	20560	27.78	
1110	LOCAL OSCILLATOR CHANNEL 7	21218	28.82	
1112	LOCAL OSCILLATOR CHANNEL 8	21661	30.60	
1114	LOCAL OSCILLATOR CHANNEL 15	22430	30.60	
1116	PLL LO #2 CHANNELS 9 THROUGH 14	20458	27.27	
1118	PLL LO #1 CHANNELS 9 THROUGH 14	23638	33.34	
1120	SPARE (NOT USED)	32767	51.27	
1122	MIXER/IF AMPLIFIER CHANNEL 3	22188	29.68	
1124	MIXER/IF AMPLIFIER CHANNEL 4	22218	29.94	
1126	MIXER/IF AMPLIFIER CHANNEL 5	21862	29.64	
1128	MIXER/IF AMPLIFIER CHANNEL 6	20974	28.29	
1130	MIXER/IF AMPLIFIER CHANNEL 7	21067	28.71	
1132	MIXER/IF AMPLIFIER CHANNEL 8	22051	29.95	
1134	MIXER/IF AMPLIFIER CH 9 THRU 14	20937	27.72	
1136	MIXER/IF AMPLIFIER CHANNEL 15	21845	30.43	
1138	IF AMPLIFIER CHANNEL 11 THRU 14	21886	30.10	
1140	IF AMPLIFIER CHANNEL 9	21913	30.21	
1142	IF AMPLIFIER CHANNEL 10	22076	30.22	
1144	IF AMPLIFIER CHANNEL 11	20707	27.89	
1146	DC/DC CONVERTER	22491	31.17	
1148	IF AMPLIFIER CHANNEL 13	20723	27.90	
1150	IF AMPLIFIER CHANNEL 14	20829	28.20	
1152	IF AMPLIFIER CHANNEL 12	20622	27.82	
1154	RF SHELF A1-1	20769	28.95	
1156	RF SHELF A1-2	21371	29.27	
1158	DETECTOR/PREAMPLIFIER ASSEMBLY	19593	26.08	
1160	A1-1 WARM LOAD 1	23641	23.61	
1162	A1-1 WARM LOAD 2	23391	23.54	
1164	A1-1 WARM LOAD 3	23630	23.63	
1166	A1-1 WARM LOAD 4	23559	23.57	
1168	A1-1 WARM LOAD CENTER	23643	23.71	
1170	A1-2 WARM LOAD 1	23905	24.53	
1172	A1-2 WARM LOAD 2	24063	24.48	
1174	A1-2 WARM LOAD 3	24219	24.60	
1176	A1-2 WARM LOAD 4	23997	24.62	
1178	A1-2 WARM LOAD CENTER	23884	24.51	
1180	TEMP SENSOR REFERENCE VOLTAGE	25324		

DESCRIPTION

STATUS

STATUS

STATUS

DESCRIPTION	STATUS	STATUS	STATUS
SCANNER A1-1 POWER	ON	ON	ON
SCANNER A1-2 POWER	ON	ON	ON
PLL POWER	PLLO # 1	PLLO # 1	PLLO # 1
ANTENNA IN WARM CAL POSITION MODE	NO	NO	NO
ANTENNA IN COLD CAL POSITION MODE	NO	NO	NO
ANTENNA IN NADIR POSITION MODE	NO	NO	NO
ANTENNA IN FULL SCAN MODE	YES	YES	YES
SURVIVAL HEATER POWER	OFF	OFF	OFF
MODULE POWER	CONNECT	CONNECT	CONNECT
COLD CAL POSITION MSB	ZERO	ZERO	ZERO
COLD CAL POSITION LSB	ZERO	ZERO	ZERO

ANALOG DATA

DESCRIPTION	VALUE	DEG C	VALUE	DEG C	VALUE	DEG C	VALUE	DEG C	AMPS/ VOLTS	AMPS/ VOLTS
A1-1 SCANNER MOTOR TEMPERATURE	214	18.0	215	19.4	215	19.4	215	19.4	88	41.01
A1-2 SCANNER MOTOR TEMPERATURE	215	19.4	217	19.4	215	19.4	215	19.4	85	39.61
A1-1 RF SHELF TEMPERATURE	217	22.1	219	24.8	217	24.1	216	20.7	170	14.67
A1-2 RF SHELF TEMPERATURE	219	24.8	214	18.0	219	24.8	218	23.4	171	14.76
A1-1 WARM LOAD TEMPERATURE	214	18.0	216	20.7	214	18.0	214	18.0	148	-15.15
A1-2 WARM LOAD TEMPERATURE	216	20.7	216	20.7	216	20.7	216	20.7	148	-15.15
A1-1 ANTENNA DRIVE MOTOR CURRENT (AVRG)	89	41.47	88	41.01	88	41.01	88	41.01	157	7.85
A1-2 ANTENNA DRIVE MOTOR CURRENT (AVRG)	86	40.08	85	39.61	85	39.61	85	39.61	145	4.83
SIGNAL PROCESSING +15 VDC	170	14.67	170	14.67	170	14.67	170	14.67	146	4.87
ANTENNA DRIVE +15 VDC	171	14.76	171	14.76	171	14.76	171	14.76	169	9.76
SIGNAL PROCESSING -15 VDC	148	-15.15	148	-15.15	148	-15.15	148	-15.15	169	9.76
ANTENNA DRIVE -15 VDC	157	-15.15	157	-15.15	157	-15.15	157	-15.15	145	4.83
RECEIVER AMPLIFIER +8 VDC	145	4.83	145	4.83	145	4.83	145	4.83	146	4.87
SIGNAL PROCESSOR +5 VDC	146	4.87	146	4.87	146	4.87	146	4.87	169	9.76
ANTENNA DRIVE +5 VDC	169	9.76	169	9.76	169	9.76	169	9.76	145	4.83
RECEIVER MIXER/IF +10 VDC	169	9.76	169	9.76	169	9.76	169	9.76	145	4.83
PHASE LOCK LOOP (CHANNEL 9/14)	145	-15.30	145	-15.30	145	-15.30	145	-15.30	145	4.83
PHASE LOCK LOOP (CHANNEL 9/14)	171	9.78	171	9.78	171	9.78	171	9.78	145	4.83
L.O. VOLTAGE (CHANNEL 8)	171	9.78	171	9.78	171	9.78	171	9.78	145	4.83
L.O. VOLTAGE (CHANNEL 7)	171	9.78	171	9.78	171	9.78	171	9.78	145	4.83
L.O. VOLTAGE (CHANNEL 6)	171	9.78	171	9.78	171	9.78	171	9.78	145	4.83
L.O. VOLTAGE (CHANNEL 3)	171	9.78	171	9.78	171	9.78	171	9.78	145	4.83
L.O. VOLTAGE (CHANNEL 4)	171	9.78	171	9.78	171	9.78	171	9.78	145	4.83
L.O. VOLTAGE (CHANNEL 5)	171	9.78	171	9.78	171	9.78	171	9.78	145	4.83
PLLO # 2 LOCK DETECT	1	0.02	1	0.02	1	0.02	1	0.02	1	0.02
PLLO # 1 LOCK DETECT	220	4.40	220	4.40	220	4.40	220	4.40	219	4.38
L.O. VOLTAGE (CHANNEL 15)	170	14.67	170	14.67	170	14.67	170	14.67	170	14.67

6 Apr 99

TEST DATA SHEET 52
Channel Identification Test (Paragraph 3.2.4.5)

Channel Number	Antenna Location	Sweeper Freq. Setting (GHz)	Polarization (H/V)	Radiometric Data Counts Δ Counts	Channel Verified (Yes/No)
3	A1-2	50.35	V	16194 17967	YES
4	A1-2	52.85	V	16377 19877	YES
5	A1-2	53.70	H	17454 18598	YES
6	A1-1	54.45	H	16819 18305	YES
7	A1-1	54.99	V	16660 18624	YES
8	A1-2	55.55	H	16422 17720	YES
9	A1-1	57.34	H	16500 17707	YES
10	A1-1	57.50	H	16052 17459	YES
11	A1-1	57.564	H	17479 18764	YES
12	A1-1	57.59	H	17227 21712	YES
13	A1-1	57.602	H	20045 31282	YES
14	A1-1	57.608	H	18050 21181	YES
15	A1-1	89.55	V		*

* BY DEFAULT, DUE TO ALL OTHER CHANNELS IDENTIFIED,

R. Haight 11/22/99 Concern 60/Note 11/22/99

Circle Test: CPT LPT

QC 229 11/23/99

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: 748613 S/N: 109

R. Haight 11/22/99
Test Systems Engineer



11-23-99



[Signature]
Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

AMSU A1-33 A1.EXE COLD CAL MODE P1 22-NOV-99 13:32:16 SCAN NUMBER 119
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BEAM POSITION 30

CH	DATA	CH	DATA	CH	DATA
3	16194	8	16422	13	20045
4	16377	9	16500	14	18050
5	17454	10	16052	15	14945
6	16819	11	17479		
7	16660	12	17227		

[21] UP [22] DOWN

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

TDS-52
BASELINE

AMSU A1-33 A1.EXE COLD CAL MODE P1 22-NOV-99 13:38:08 SCAN NUMBER 163

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BEAM POSITION 30

CH	DATA	CH	DATA	CH	DATA
3	17967	8	16732	13	20005
4	16367	9	16480	14	17999
5	17446	10	16025	15	14914
6	16794	11	17428		
7	16640	12	17183		

[21] UP [22] DOWN

POWER [4] ON SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

70352

AMSU A1-33 A1-EXE COLD CAL MODE P1 22-NOV-99 13:39:48 SCAN NUMBER 176

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BEAM POSITION 30

CH	DATA	CH	DATA	CH	DATA
3	16169	8	16424	13	19979
4	19877	9	16472	14	17948
5	17438	10	16014	15	14908
6	16786	11	17416		
7	16634	12	17172		

[21] UP

[22] DOWN

POWER [4] ON

SELECT TOUCHSCREEN BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

TDS 52

AMSU A1-33 A1.EXE COLD CAL MODE P1 22-NOV-99 13:41:49 SCAN NUMBER 191

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BEAM POSITION 30

CH DATA CH DATA CH DATA

3 16161 8 16393 13 19943
4 16310 9 16460 14 17953
→ 5 18598 10 16013 15 14898
6 16780 11 17398
7 16628 12 17149

[21] UP

[22] DOWN

POWER [4] ON

SCREEN ONLY [2] PRINT [3] FULL

[1] RETURN

SELECT TOUCHSCREEN BUTTON 2

7DS52

AMSU A1-33 A1.EXE COLD CAL MODE P1 22-NOV-99 14:21:40 SCAN NUMBER 490

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BEAM POSITION 30

CH	DATA	CH	DATA	CH	DATA
3	16059	8	16270	13	20456
4	16139	9	17042	14	18191
5	17277	10	16727	15	14767
→6	18305	11	17949		
7	16545	12	17527		

[21] UP [22] DOWN

POWER [4] ON

SELECT TOUCHSCREEN BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

7DS52

AMSU A1-33 A1.EXE COLD CAL MODE P1 22-NOV-99 14:19:00 SCAN NUMBER 470
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BEAM POSITION 30

CH	DATA	CH	DATA	CH	DATA
3	16063	8	16275	13	19746
4	16145	9	16409	14	17682
5	17281	10	15942	15	14772
6	16695	11	17192		
→ 7	18624	12	16963		

[22] DOWN

[21] UP

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

7DS52

AMSU A1-33 A1.EXE COLD CAL MODE P1 22-NOV-99 13:43:57 SCAN NUMBER 207
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BEAM POSITION 30

CH	DATA	CH	DATA	CH	DATA
3	16158	8	17720	13	19943
4	16302	9	16455	14	17910
5	17410	10	16000	15	14887
6	16773	11	17378		
7	16614	12	17132		

[21] UP [22] DOWN

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

7DS52

AMSU A1-33 A1.EXE COLD CAL MODE P1 22-NOV-99 14:24:55 SCAN NUMBER 514

[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BEAM POSITION 30

CH	DATA	CH	DATA	CH	DATA
3	16047	8	16262	13	19666
4	16129	9	17707	14	17622
5	17272	10	15903	15	14757
6	16686	11	17131		
7	16539	12	16909		

[21] UP [22] DOWN

POWER [4] ON SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

7DS52

AMSU, A1-33 A1.EXE COLD CAL MODE P1 22-NOV-99 14:26:24 SCAN NUMBER 525
[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BEAM POSITION 30

CH	DATA	CH	DATA	CH	DATA
3	16045	8	16255	13	19668
4	16124	9	16370	14	17587
5	17268	10	17459	15	14754
6	16684	11	17126		
7	16538	12	16904		

[21] UP [22] DOWN

POWER [4] ON SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

7DS52

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BEAM POSITION 30

CH	DATA	CH	DATA	CH	DATA
3	16046	8	16255	13	19665
4	16123	9	16368	14	17571
5	17263	10	15896	15	14748
6	16682	11	18764		
7	16534	12	16900		

[22] DOWN

[21] UP

POWER [4] ON
SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

7DS52

AMSU A1-33 A1.EXE COLD CAL MODE P1 22-NOV-99 14:29:40 SCAN NUMBER 550
[5] DIGITAL A DATA ELEMENT 0000
[6] DIGITAL B DATA ELEMENT 00
[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BEAM POSITION 30

CH	DATA	CH	DATA	CH	DATA
3	16041	8	16252	13	19654
4	16120	9	16364	14	17582
5	17262	10	15886	15	14742
6	16675	11	17109		
7	16531	12	21712		

[21] UP

[22] DOWN

POWER [4] ON

SELECT TOUCHSCREEN BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

72552

560

SCAN NUMBER

P1 22-NOV-99 14:31:00

COLD CAL MODE
ELEMENT 0000

AMSU A1-33 A1.EXE
[5] DIGITAL A DATA

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BEAM POSITION 30

CH	DATA	CH	DATA	CH	DATA
3	16038	8	16246	13	31282
4	16114	9	16367	14	17558
5	17258	10	15883	15	14736
6	16674	11	17099		
7	16526	12	16897		

[21] UP [22] DOWN

POWER [4] ON SCREEN ONLY [2] PRINT [3] FULL [1] RETURN
SELECT TOUCHSCREEN BUTTON 2

7DS52

AMSU A1-33 A1.EXE COLD CAL MODE P1 22-NOV-99 14:35:32 SCAN NUMBER 594
[5] DIGITAL A DATA ELEMENT 0000

[6] DIGITAL B DATA ELEMENT 00

[7] ANALOG DATA ELEMENT 00

RADIOMETRIC DATA

BEAM POSITION 30

CH	DATA	CH	DATA	CH	DATA
3	16032	8	16246	13	19609
4	16104	9	16357	14	21181
5	17248	10	15878	15	14710
6	16669	11	17076		
7	16522	12	16866		

[21] UP

[22] DOWN

POWER [4] ON

SELECT TOUCHSCREEN BUTTON 2 SCREEN ONLY [2] PRINT [3] FULL [1] RETURN

72852



DOCUMENT APPROVAL SHEET

TITLE Performance Verification Report Initial Comprehensive Performance Test Report, P/N 1331720-2-IT, S/N 108/A1		DOCUMENT NO. Report 11647 November 1999	
INPUT FROM: L. Paliwoda	CDRL: 208	SPECIFICATION ENGINEER: N/A	DATE
CHECKED BY: N/A	DATE	JOB NUMBER: N/A	DATE
APPROVED SIGNATURES		DEPT. NO.	DATE
Product Team Leader (A. Nieto) <u><i>A. Nieto</i></u>		8341	11 Nov 99
Systems Engineer (R. Platt) <u><i>Robert H Platt</i></u>		8311	11/17/99
Design Assurance (E. Lorenz) <u><i>E. Lorenz</i></u>		8331	11/17/99
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PMO/Technical (P. Patel) <u><i>P. R. Patel</i></u>		8341	11/17/99
Released: Configuration Management (J. Cavanaugh) <u><i>J. Cavanaugh</i></u>		8361	11/18/99
By my signature, I certify the above document has been reviewed by me and concurs with the technical requirements related to my area of responsibility.			
(Data Center) FINAL			
<u><i>Laura Cornejo</i></u> 12-2-99			

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Electronic Systems Plant

P.O. Box 296

Azusa, California 91702-0296

CAGE/Facility Ident: 70143

GENCORP
AEROJET

AE-26156/3C

6 April 1999

Superseding

AE-26156/3B

10 March 1999

PROCESS SPECIFICATION

**METSAT/KLM/AMSU-A1, SYSTEM COMPREHENSIVE
AND LIMITED PERFORMANCE TESTS
TEST PROCEDURE**

1331720-2-ITS/N108

90 369024

Contract No.: NAS5-32314

Prepared for:

**NASA/Goddard Space Flight Center
Greenbelt Road
Greenbelt, MD 20771**

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1. SCOPE

1.1 Scope. This specification establishes the requirements for the Comprehensive Performance Test (CPT) and Limited Performance Test (LPT) of the Advanced Microwave Sounding Unit-A1 (AMSU-A1), referred to herein as the unit. The unit is defined on Drawing 1331720.

1.2 Test procedure sequence. The sequence in which the several phases of this test procedure shall take place is shown in Figure 1, but the sequence can be in any order.

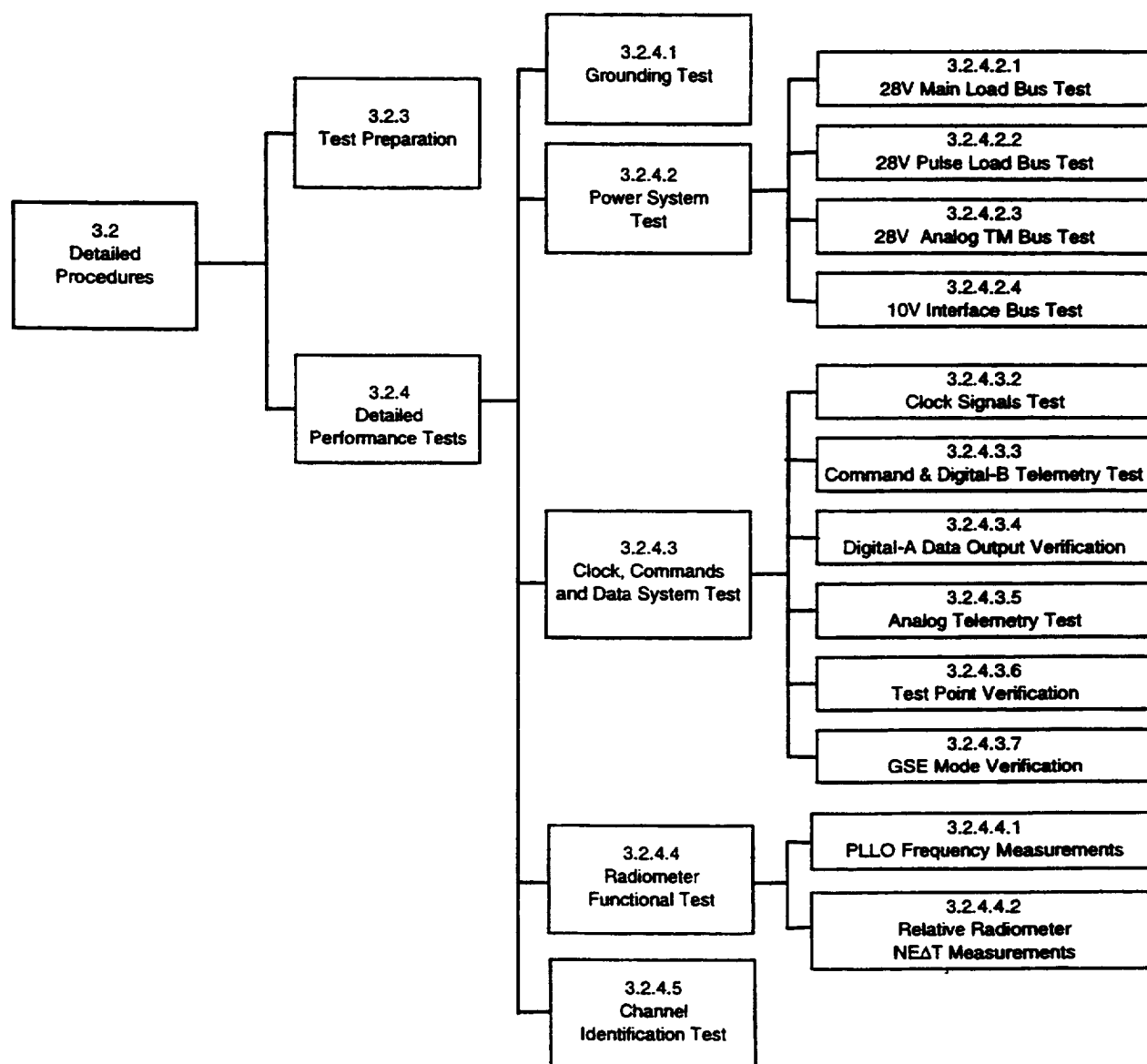


Figure 1. Test Procedure Sequence

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2. APPLICABLE DOCUMENTS

2.1 Government documents. The following documents form a part of this specification to the extent specified. Unless otherwise specified, the issue shown shall apply.

STANDARDS

Military

MIL-STD-45662	Calibration Systems Requirements
---------------	----------------------------------

OTHER DOCUMENTS

S-480-79	Performance Assurance Requirements for the EOS/METSAT Integrated Programs Advanced Microwave Sounding Unit-A (AMSU-A) (PAR)
S-480-80	Performance and Operation Specification for the EOS/METSAT Integrated Programs Advanced Microwave Sounding Unit-A (AMSU-A) (POS)
IS-2617547	AMSU-A1 Unique Instrument Interface Specification (UIIS)
IS-3267415	ATN-KLM General Instrument Interface Specification (GIIS)

(Copies of government documents should be obtained as indicated in the Department of Defense Index of Specification and Standards.)

2.2 Non-Government documents. The following documents form a part of this specification to the extent specified herein. Unless otherwise specified, the issue in effect on the date of testing shall apply.

2.2.1 Aerojet documents

SPECIFICATION

AE-26002/1	Test Procedure, Subsystem, Antenna Drive for AMSU-A1
AE-26151/5	Test Procedure, EMI/EMR & EMC for the METSAT/METOP Advanced Microwave Sounding Unit-A (AMSU-A)
AE-26157	Special Test Equipment (STE), Operation and Maintenance Manual
AE-26357	Transportation Handling Procedure for the AMSU-A System Integrated Program

STANDARD

STD-2454	Requirements for Electrostatic Discharge Control
----------	--

AE-26156/3C

6Apr 99

REPORT

10353

Contamination Control Plan for the Advanced Microwave
Sounding Unit-A (AMSU-A)

DRAWINGS

1331720

Advanced Microwave Sounding Unit A1 (AMSU-A1)

1335695

Special Test Equipment

1356655

Console Assembly, METSAT and EOS STE

(Copies of Aerojet documents may be obtained from Gencorp Aerojet, Azusa Operations, CAGE 70143, P.O. Box 296, Azusa, California, 91702-0296).

6 Apr 99

3. REQUIREMENTS

3.1 General test requirements

3.1.1 Equipment and test facilities. The tests described herein shall be performed at Aerojet under laboratory conditions in an EMI shielded chamber for the first and final CPT. Other tests need not be accomplished in the EMI shielded chamber. The test equipment listed in Table I shall be used when performing the tests. If the specified equipment is not available, the equipment substituted shall provide a measurement accuracy equal to or greater than that of the specified equipment. The AMSU-A Special Test Equipment (STE) shall be used for activation and control of the unit and monitoring of its performance.

Table I. Equipment List

Item	Quantity	Item Description	Mfg.	Model
1	1	Dynamic signal analyzer	Hewlett-Packard	3562A
2	1	Signal Generator	Hewlett-Packard	3314A
3	1	Oscilloscope	Tektronix	2225A
4	1	9-pin breakout box	Aerojet	2536-3743/SK1358702-1
5	1	15-pin breakout box	Aerojet	2536-3744/SK1358703-1
6	2	25-pin breakout box	Aerojet	2336-3746/SK1358704-1
7	1	37-pin breakout box	Aerojet	2536-3745/SK1358705-1
8	1	Relay Board	Aerojet	—
9	1	Double Shielded Connector	—	—
10	1	Lab. General Purpose Power Supply	Hewlett-Packard	6114
11	1	Oscilloscope	Tektronix	466A
12	1	Power Supply	Power Designs	3650-S
13	1	WR19 Harmonic Mixer (40-60 GHz)	Hewlett-Packard	HP11970V
14	1	Power Meter	Anritsu	ML83A
15	1	WR19 Feed Horn	TRG	V861
16	1	LN2 Container	Cole	N03726-20
17	1	Spectrum Analyzer	Hewlett-Packard	8566B
18	1	STE Computer	Aerojet	1336695
19	1	STE Interface Cable J1	Aerojet	1335758-1
20	1	STE Interface Cable J2	Aerojet	1335752-1
21	1	STE Interface Cable J3	Aerojet	1335756-1
22	1	STE Interface Cable J4	Aerojet	1335755-1
23	1	STE Interface Cable J5	Aerojet	1335753-1
24	1	STE Interface Cable J6	Aerojet	1335754-1
25	1	STE Interface Cable J7	Aerojet	1335757-1
26	1	Oscilloscope Camera	Tektronix	—
27	1	Current Probe	Tektronix	AM503
28	1	Plotter	Hewlett-Packard	7475A
29	1	Frequency Counter	Hewlett-Packard	5316A
30	1	Multimeter (Digital volt-ohm meter)	Fluke	77

Table I. Equipment List (Continued)

Item	Quantity	Item Description	Mfg.	Model
31	1	Cold Target Stand A1-1	Aerojet	T-1291001-3
32	1	Cold Target Stand A1-2	Aerojet	T-1291001-2
33	2	Cold Target Support	Aerojet	T-1291000-1
34	1	Sweeper	Hewlett-Packard	83623A
35	1	Multiplier	Hewlett-Packard	83557A/83558A
36	1	Coupler/Detector	Hewlett-Packard	83557-60001
37	1	Spectrum Analyzer	Hewlett-Packard	8563E

3.1.2 Required procedures and operations. The unit shall be subjected to the examinations and tests specified in 3.2.4 and Table II.

3.1.2.1 Limited performance test (LPT). The Limited Performance Test shall consist of the test procedures specified in the LPT column of Table II.

3.1.2.2 Comprehensive performance test (CPT). Three versions of the Comprehensive Performance Test are identified in Table II. These are applicable for different test stages. The test procedures to be performed for each version are specified in the 1st CPT, Sub CPT, and Final CPT columns of Table II. See 3.1.1 for required location of the first and the final CPT.

3.1.3 Inspection instructions. The following shall apply to all inspections performed under this specification.

- a. **Personnel familiarization:** All personnel directly concerned with the conduct of the inspection shall become familiar with the entire content of this document before beginning the tests. Each step, including all notes, warnings, and cautions, shall be understood thoroughly before starting.
- b. **Referenced documents:** Performance of the tests specified herein may require reference to the documents listed in Section 2. It is recommended that the applicable issues of these documents be available at the time and place of testing.

3.1.4 Test conditions. The following paragraphs shall apply to all testing described in this document.

3.1.4.1 Standard ambient conditions. Unless otherwise specified in a detailed method paragraph, all handling shall be performed under the following laboratory ambient conditions.

- a. Handling in accordance with AE-26357
- b. Contamination control in accordance with Report 10353
- c. Temperature: $+23 \pm 10^{\circ}\text{C}$
- d. Pressure: 610 to 810 torr
- e. Humidity: $50 \pm 20\%$ (no condensation)
- f. The instrument shall be placed in its protective bag (1338427) when not in use.

Table II. AMSU-A1 Performance Tests

Paragraph	Test Description	1st CPT	LPT	Sub CPT	Final CPT
3.2.4.1	Grounding	X	X	X	X
3.2.4.2.1.1	+28 Main Load Bus (MLB) Turn-On Transient	X			X
3.2.4.2.1.2	+28 MLB Operating Power	X	Note 2	Note 3	X
3.2.4.2.1.3	Instrument Feedback Test	Note 8			
3.2.4.2.1.4	Transient Susceptibility Test	X			
3.2.4.2.2	+28 Pulse Load Bus (PLB) Peak Current	X		Note 4	X
3.2.4.2.2.8	Instrument Feedback Test (PLB)	Note 8			
3.2.4.2.2.9	Transient Susceptibility Test	X			
3.2.4.2.3	+28 Analog Telemetry Bus (ATB)	X		X	X
3.2.4.2.3.2	Instrument Feedback Test (ATB)	Note 8			
3.2.4.2.3.3	Transient Susceptibility Test	X			
3.2.4.2.4	+10 V Interface Bus	X		X	X
3.2.4.2.4.2	Instrument Feedback Test	Note 8			
3.2.4.2.5	Power Input Test for LPT		X		
3.2.4.3.2	Clock Signals	X			X
3.2.4.3.3	Commands and Digital-B Telemetry	X	X	X	X
3.2.4.3.4	Digital-A Data Output	X	Note 5	Note 5	X
3.2.4.3.5	Analog Telemetry	X	Note 6	Note 6	X
3.2.4.3.6	Test Points	X		X	X
3.2.4.3.7	GSE Mode	X Note 7			
3.2.4.4	Radiometer Functional	Title			
3.2.4.4.1	PLLO Frequency Measurement	X			X
3.2.4.4.2.2	Relative NE Δ T	X	X	X	X
3.2.4.5	Channel Identification Test	X			
Notes: 1. Test Data Sheets for CPT/LPT located in Appendix A. 2. 3.2.4.2.5 (Power input test for LPT). 3. At 28 V only. 4. 3.2.4.2.2 except 3.2.4.2.2.6. 5. Only full scan. 6. STE only. 7. GSE mode test/verification is not required and is for engineering use only. 8. Instrument feedback test will be performed in the EMI/RFI chamber using EMI/RFI test procedure AE-26151/5.					

3.1.4.2 Test tolerances. The tolerances allowed on test conditions are intended only to provide for accuracy of such items as instrumentation and controls. Conditions shall be as close as possible to the nominal or center values specified, and in no instance shall they exceed the tolerances specified. Unless otherwise specified, the tolerances shall be within $\pm 10\%$.

3.1.4.3 Read-out accuracy. Parameters are specified either as limits or as nominal values with plus-or-minus tolerances. These limits and tolerances shall be regarded as absolute, and the inaccuracies of measuring equipment shall not be interpreted as part of measured values in such a way that out-of-limit measurements may appear in-limit.

3.1.5 Electrostatic Sensitive Device (ESD) handling. All electronic hardware shall be handled in accordance with Aerojet Standard STD-2454.

3.2 Detailed Procedures

3.2.1 Responsibility for inspection. All tests specified herein shall be performed under the cognizance of Aerojet Quality Assurance.

3.2.2 Monitoring procedures for equipment. Test equipment calibration schedules and procedures shall comply with the requirements of MIL-STD-45662. Before performing examinations and tests in accordance with this procedure, all test equipment to be used shall be verified as being within their current calibration period. Calibration or alignment, necessary for operation of the equipment within the requirements of this document, shall be performed when required.

3.2.3 Test preparation

3.2.3.1 STE connection. The power sources, signal sources, and loads are provided to the unit under test by the AMSU-A Special Test Equipment (STE) (Drawing 1335695 or 1356655), in accordance with paragraph 5.2 of S-480-80. The STE is automated test equipment controlled by a MicroVax computer. The unit shall be connected to the STE in accordance with AE-26157 and the detailed test procedures in 3.2.4.

3.2.3.2 Signal sources. Signal sources required during the performance test but not provided by the STE are as follows:

- a. Cold background at LN₂ temperature at room ambient.
- b. $+28 \pm 1$ Vdc, 3 Amps.

3.2.3.3 Signal outputs. Signal outputs, except for the test signals at J7, shall be monitored by the STE. The signal outputs at J7 are shown in Figure 2.

3.2.3.4 Test software. AMSU-A1 bonded software shall be used to operate the STE. During initialization of the STE, as specified in AE-26157, the A1 software shall be selected. The bonded software is being selected by the STE computer automatically during initialization of the STE.

3.2.3.5 Initial turn-on. When called for in the individual test procedures, turn on the unit as follows:

1. Turn on the STE and initialize the STE as specified in AE-26157.
2. Connect breakout box to J1 on the STE +28 V power supply cable J1.
3. Connect DVM to J1-1 (+) and J1-3 (RTN).
4. Verify that the STE power supply POWER switch on the STE +28 V power supply is ON and the power supply is adjusted to $+28 \pm 0.5$ Vdc.
5. Verify that the PWR and SW/TM switches on the STE power distribution unit are ON.
6. Enter the serial number (decimal equivalent of the identification number provided in the UIIS) for the unit under test using AE-26157, if necessary. Verify that the Main Menu (AMSU-A1 WHAT TYPE OF TEST?) is displayed on the STE CRT terminal display.
7. On the Main Menu, press the [2] MONITOR ONLY touch area (or type the number). The Monitor Only Menu will be displayed, with Block Monitor Data Select options shown in the middle (window) area of the screen.

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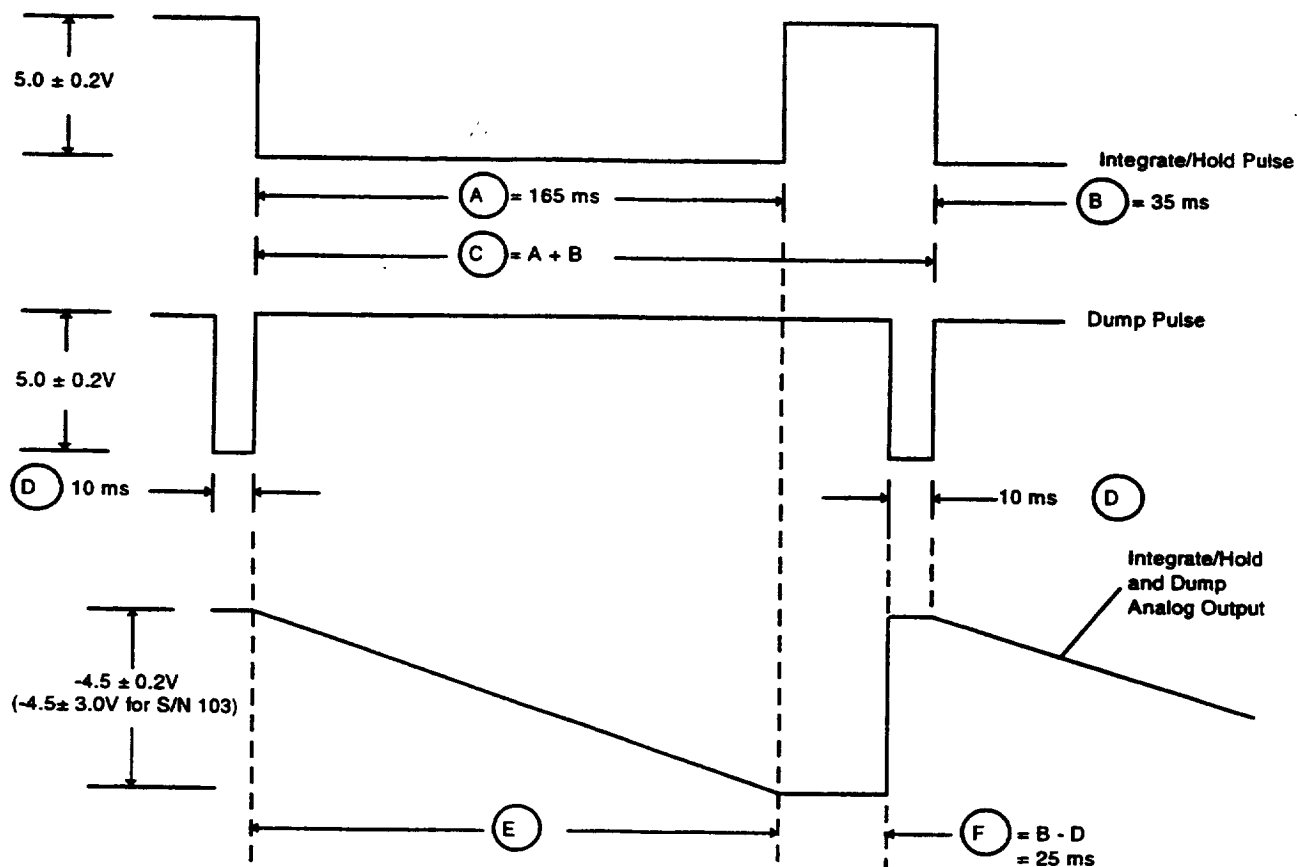
NOTE: Timing Tolerances are $\pm 10\%$.

Figure 2. Signal Output at J7

8. On the Monitor Only Menu, press [14] COMMANDS. The Commands Menu will be displayed in the window area.
9. On the Commands Menu, press [9] MODULE POWER = CONNECT. Wait at least 18 seconds for command execution. This applies power to the unit.
10. Execute commands as necessary to obtain the following configuration:

COMMANDS			
[9] MODULE POWER =	CONNECT	ANTENNA IN COLD CAL POS =	NO [15]
[10] SURVIVAL HTR PWR =	OFF	ANTENNA IN NADIR POS=	NO [16]
[11] MODULE TOTALLY OFF =	ON	ANTENNA FULL SCAN MODE =	YES [17]
[12] SCANNER A1-1 POWER =	ON	PLL POWER =	PLLO#1 [18]
[13] SCANNER A1-2 POWER =	ON	COLD CAL POSITION MSB =	ZERO [19]
[14] ANTENNA WARM CAL POS =	NO	COLD CAL POSITION LSB =	ZERO [20]
POWER [4] ON			

11. Wait at least 18 seconds and observe the commands are acknowledged by STE.

12. Verify that the STE power supply is adjusted to $+28 \pm 0.5$ Vdc (see steps 2 through 4) .
13. Verify that all breakout box switches are in the closed position.
14. According to the individual test procedures, execute commands as necessary to obtain the required commands configuration. Several commands can be executed at the same time.

3.2.3.6 Turn-off methods. The unit can be turned off immediately by pressing [9] MODULE POWER = DISCONNECT on the Commands Menu. For a phased shutdown, press [11] MODULE TOTALLY OFF = OFF on the Commands Menu or press POWER [4] OFF on any display. When connecting breakout boxes to the unit or STE connectors, verify that the unit power is off and the STE +28 V power supply is manually turned off.

NOTE

If power of the unit is turned off by command [9] MODULE POWER = DISCONNECT or the STE program is interrupted, then perform a phased shutdown after turn-on before starting next step.

3.2.4 Detailed performance tests. The comprehensive performance tests for the AMSU-A1 system are to be carried out on the fully assembled and operational unit. The tests to be performed are as follows:

- a. Grounding/Isolation system test.
- b. Power system test.
- c. Clock commands and data system test.
- d. Radiometer functional test.
- e. Transient susceptibility test.
- f. Instrument feedback test.

3.2.4.1 Grounding test. This test provides the verification of the unit grounding requirements of GIIS IS-3267415 Paragraph 3.1.1 and UIIS IS-2617547 paragraph 3.1.1.

1. Connect breakout boxes to each of the spacecraft interface connectors J1 through J7 as shown in Figure 3. Verify that all connectors are protected with connector savers.
2. Measure and record continuity or isolation between the points shown on Test Data Sheet (TDS) 1.

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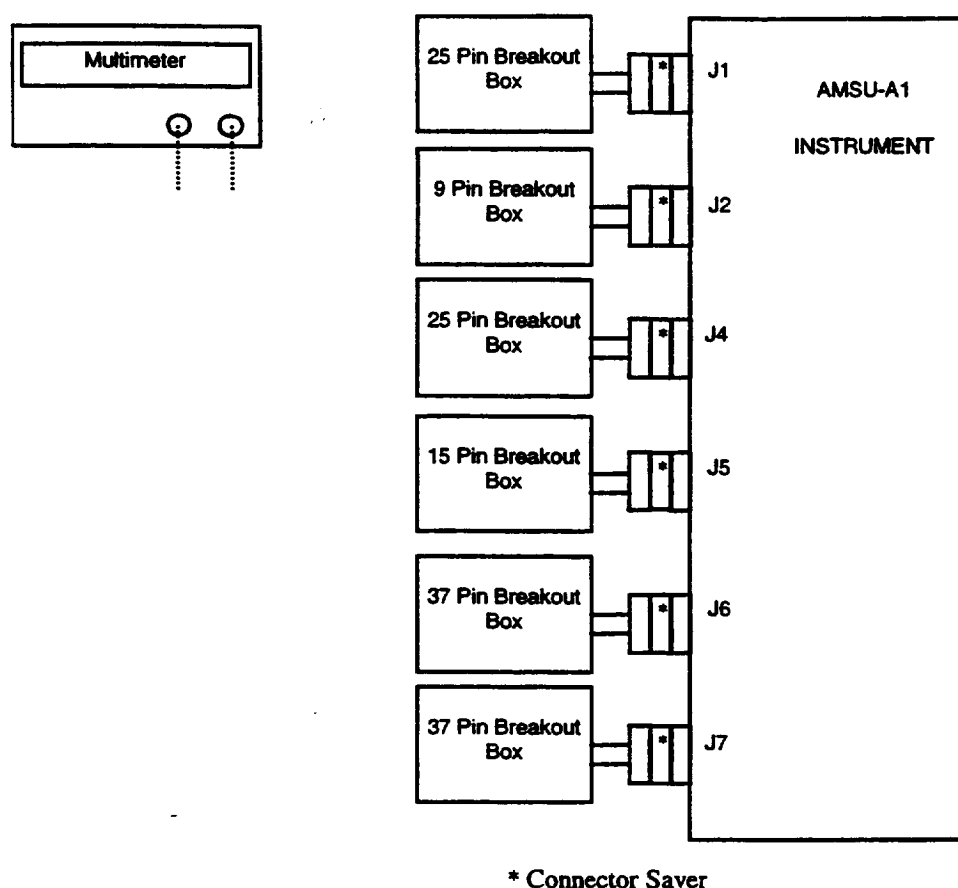


Figure 3. Grounding Test Setup

3.2.4.2 Power system, transient susceptibility, power quality, and instrument feedback tests. The purpose of these tests is to verify power system compliance in regard to:

- a. Turn-On transients
- b. Operating power
- c. Transient susceptibility
- d. Current ripple

The following DC voltage lines will be tested for the above parameters:

- a. +28 V Main Load Bus (parameters a, b, c, d)
- b. +28 V Pulse Load Bus (parameters a, b, c, d)
- c. +28 V Analog Telemetry Bus (parameters b, c, d)
- d. +10 V Interface Bus (parameters b, d)

3.2.4.2.1 +28 V main load bus test

3.2.4.2.1.1 +28 V MLB during turn on transient. The +28 V MLB (at 28.56 Vdc) during turn on, shall be verified as follows:

1. Configure the unit and test equipment as shown in Figure 4. Obtain DSA trigger from J4-14. Verify that switches 1, 2, 14 and 15 of the breakout box are in the OPEN position. Disconnect +28 Vdc external power supply output at J1 and adjust the power supply to read 28.56 ± 0.05 Vdc on voltmeter. Re-connect the power supply output (J1) as shown in Figure 4.
2. Configure the Dynamic Signal Analyzer (DSA) as follows:

Select MEAS MODE	Select INPUT COUPLE
Select <i>Time Capture</i>	Select <i>CH1 DC</i>
Select <i>Capture Select</i>	Select <i>CH1 Ground</i>
Select <i>Capture Length</i> ; Enter 300.0; Select <i>msec</i>	Select INPUT TRIG
Select FREQ	Select <i>Trig Level</i> ; Enter 100; Select <i>mV</i>
Select <i>E SMPL Off</i>	Select <i>Arm AU</i>
Select <i>Freq Span</i> ; Enter 25; Select <i>kHz</i>	Select <i>Ext</i> ; Select <i>(-) Slope</i>
Select SELECT MEAS	Select TRIG DELAY
Select <i>Power Spec</i>	Enter 0; Select <i>μSec</i>
Select <i>CH1 Active</i>	Select COORD
Select WINDOW	Select <i>Real</i>
Select <i>Hann</i>	Select VIEW INPUT
Select SOURCE	Select <i>Time Buff</i>
Select <i>Source Off</i>	Select SCALE
Select AVG	Select <i>X Fixd Scale</i> ; Enter 0.0, 300; Select <i>msec</i>
Select <i>Avg Off</i>	Select <i>Y Fixd Scale</i> ; Enter 0.80; Select <i>mV</i>
Select <i>Tim Av Off</i>	Select UNITS
Select RANGE	Select <i>Hz (sec)</i>
Select <i>Chan 1 Range</i> ; Enter 1; Select <i>V</i>	

NOTE

Prior to collecting any current data, the current meter and DSA have to be "zeroed out"; zero current reference has to be established on the DSA. Follow this interim procedure to zero reference the current meter and DSA.

- a) Select 1.0 A/10mV per div. on the current amplifier.
 - b) Remove the current probe from the circuit and close the probe. Place the probe in a magnetic benign location.
 - c) Adjust the "y" axis voltage range to ± 4 mV.
 - d) Place the DSA in "Free Run" Trigger and depress "Start Capture" on the DSA.
 - e) With the "capture in process", adjust the "output DC level" control on the current amplifier to indicate zero current on the DSA.
 - f) Position the current probe to its original location in accordance with Figure 4, and return the DSA to "Ext" trigger.
3. Turn the unit ON by selecting [9] MODULE POWER; set up the operating modes as defined in paragraph 3.2.3.5 (reference the command screen parameters below). If necessary, adjust the external power supply for 28 Vdc.



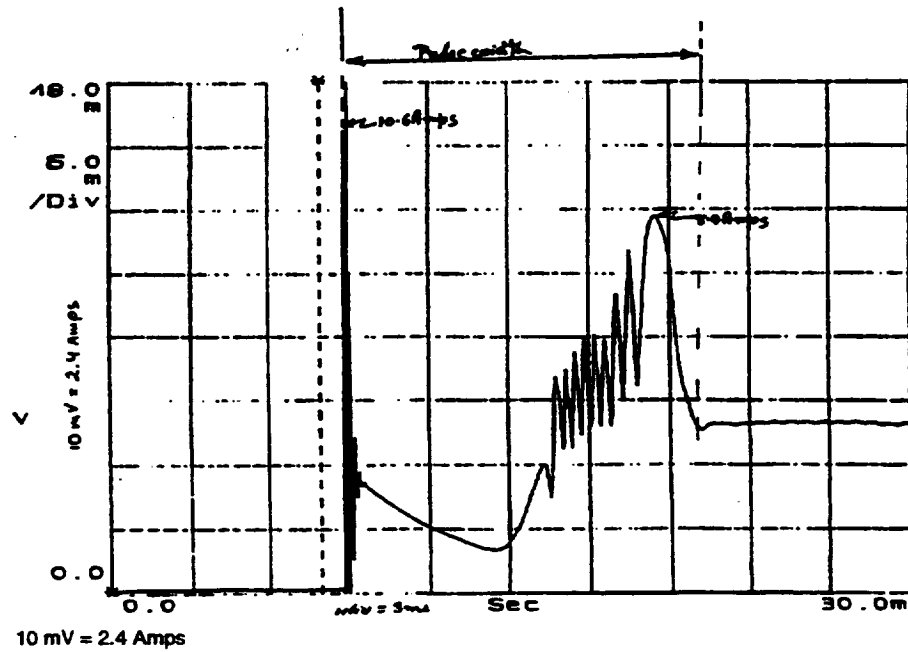
Figure 4. +28 V Main Load Bus Verification Setup

COMMANDS			
[9] MODULE POWER =	CONNECT	ANTENNA IN COLD CAL POS =	NO [15]
[10] SURVIVAL HTR PWR =	OFF	ANTENNA IN NADIR POS=	NO [16]
[11] MODULE TOTALLY OFF =	ON	ANTENNA FULL SCAN MODE =	YES [17]
[12] SCANNER A1-1 POWER =	ON	PLL POWER =	PLLO#1 [18]
[13] SCANNER A1-2 POWER =	ON	COLD CAL POSITION MSB =	ZERO [19]
[14] ANTENNA WARM CAL POS =	NO	COLD CAL POSITION LSB =	ZERO [20]
POWER [4] ON			

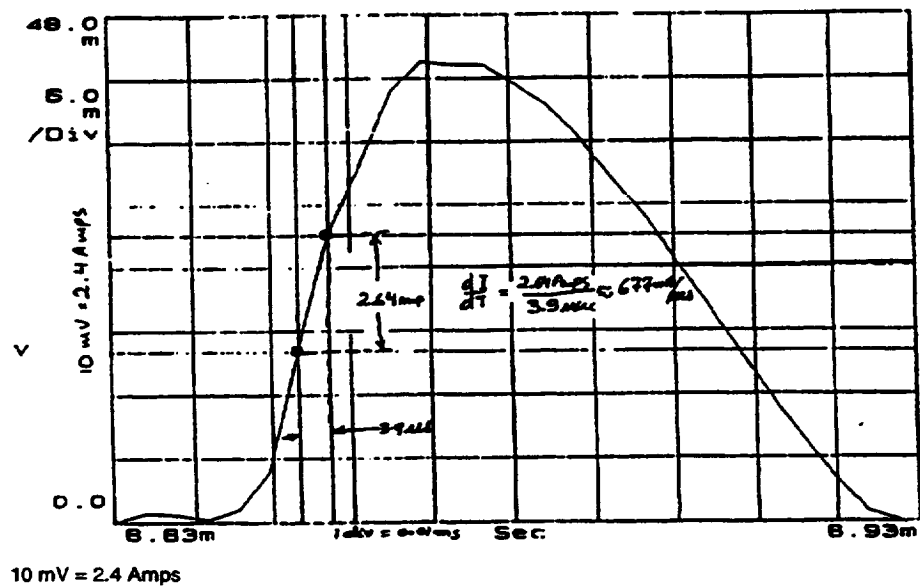
4. Turn the unit OFF by executing command [9] MODULE POWER. Confirm the command has been executed on the STE display.
5. Start the DSA signal capture by depressing "Start Capture"; wait for the DSA message "waiting for trigger" before proceeding.
6. On the STE computer, select [9] MODULE POWER and obtain a record of the +28 MLB Turn-On current waveform. On the STE computer, select [9] MODULE POWER to turn the instrument's power OFF. Adjust the display time base and voltage sensitivity to allow for adequate current and pulse duration measurements (refer to Figure 5 or Figure 6 for an example of per division values). Plot the obtained waveform and attach a hard copy of the scan to TDS 2.
7. Measure the Turn-On time to reach steady state current; record this value on TDS 2.
8. Compute the peak current as follows:
 Measure the maximum Y value by the current/div as selected on the current amplifier. As an example, if the current amplifier is set up to display 1.0 A/10 mV per division, and the maximum Y value = 46.8 mV:

$$46.8 \text{ mV} \times (1.0 \text{ A}/10 \text{ mV}) = 4.68 \text{ amps}$$
 Record this value on TDS 2.
9. The 1st derivative of the current waveform must be calculated. Compute the dI/dT as follows:
 The most probable location of the greatest current demand is during the first positive transition after voltage application. If this is the case, expand that segment of the display and measure the greatest voltage transition in the smallest time transition. The change in voltage times the current/div as selected on the current amplifier produces the change in current. Next divide this change in current by the change in time (in microseconds). This value is dI/dT. Example:
 Change in voltage 35.29 mV
 Change in time (microseconds)..... 31.25 μ s
 Current/div on current amplifier 1000 mA/10 mV

$$35.29 \text{ mV} \times (1000 \text{ mA}/10 \text{ mV})/31.25 \mu\text{s} = 112.9 \text{ mA}/\mu\text{s}$$
10. Record the computed value on TDS 2.
11. With the multimeter, adjust the external power supply to $27.44 \pm 0.05 \text{ Vdc}$ as measured between J1-1 (high) and J1-3 (low).
12. Repeat steps 3 through 10.
13. With the multimeter, adjust the external power supply to $28.00 \pm 0.05 \text{ Vdc}$ as measured between J1-1 (high) and J1-3 (low).
14. Repeat steps 3 through 10.

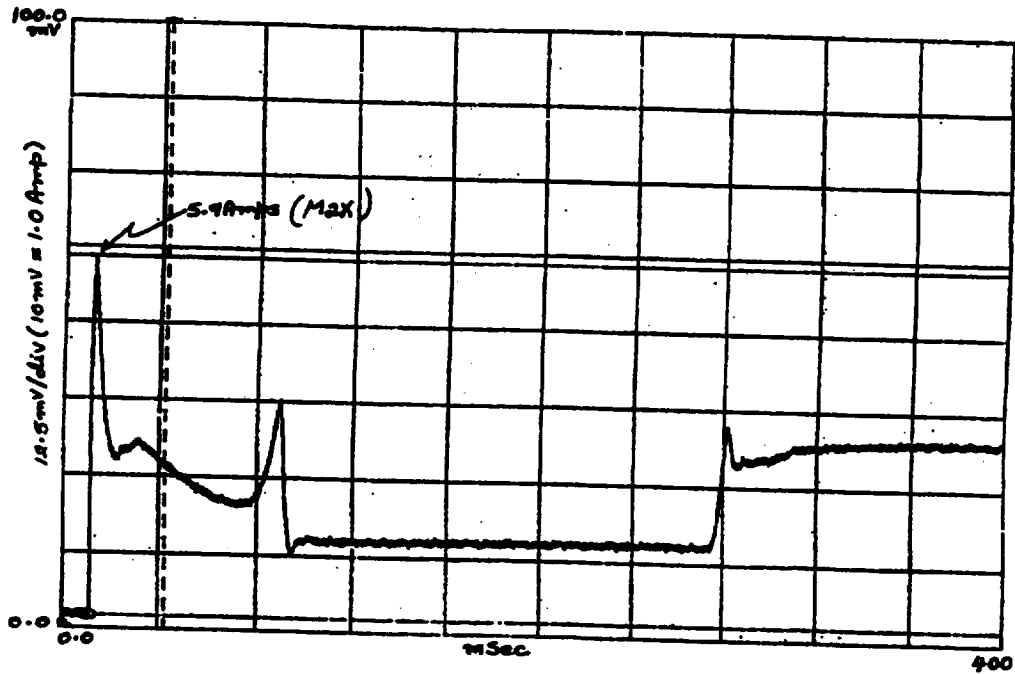


AMSU-A1 (S/N 102) Main Load Bus Worst Case Transient

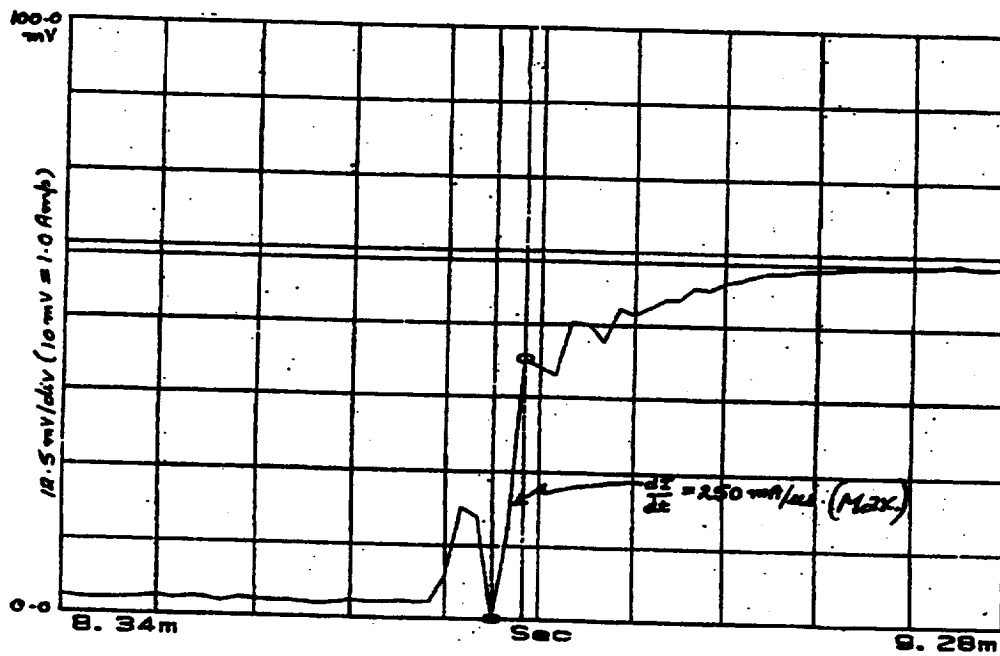


AMSU-A1 (S/N 102) Main Load Bus $\frac{dI}{dt}$ at Worst Case Transient

Figure 5. +28 V Main Bus Load Peak Power for KLM (S/N 102, 103 and 104)



AMSU-A1 Main Load Bus Worst Case Turn-on Transient



AMSU-A1 Main Load Bus $\frac{dI}{dt}$ at Worst Case Turn-on Transient

Figure 6. +28 V Main Bus Load Peak Power for METSAT (S/N 105 and up)

3.2.4.2.1.2 +28 V MLB operating power. Measure the steady state current, voltage, and power as follows:

1. Configure the unit and test equipment as shown in Figure 4. Verify that switches 1, 2, 14 and 15 of the breakout box are in the OPEN position.
2. Turn off power supplies. Insert current meter in positive lead of external power supply, turn power supplies on. Place the unit in operating condition as described in 3.2.4.2.1.1, step 3. While monitoring voltmeter No. 1, adjust the external power supply to 27.0 ± 0.1 volts (see Figure 4). Record the voltage displayed on voltmeter No. 1 on TDS 3 (MLB voltage at 27 Vdc).
3. Record the operating current on TDS 3.
4. Compute the operating power (in watts) as explained on TDS 3.
5. Execute command [18] PLL POWER to change from PLLO#1 to PLLO#2. Allow the instrument to stabilize for a minimum of two minutes.
6. Record the operating current on TDS 3.
7. Compute the operating power (in watts) as explained on TDS 3.
8. Execute command [18] PLL POWER to change from PLLO#2 to PLLO#1. Allow the instrument to stabilize for a minimum of two minutes.
9. Adjust the external power supply to 28.0 ± 0.1 Vdc and record voltage on TDS 3.
10. Record the operating current on TDS 3.
11. Compute the operating power (in watts) as explained on TDS 3.
12. Execute command [18] PLL POWER to change from PLLO#1 to PLLO#2. Allow the instrument to stabilize for a minimum of two minutes.
13. Record the operating current on TDS 3.
14. Compute the operating power (in watts) as explained on TDS 3.
15. Execute command [18] PLL POWER to change from PLLO#2 to PLLO#1. Allow the instrument to stabilize for a minimum of two minutes.
16. Adjust the external power supply to 29.0 ± 0.1 Vdc and record voltage on TDS 3.
17. Record the operating current on TDS 3.
18. Compute the operating power (in watts) as explained on TDS 3.
19. Execute command [18] PLL POWER to change from PLLO#1 to PLLO#2. Allow the instrument to stabilize for a minimum of two minutes.
20. Record the operating current on TDS 3.
21. Compute the operating power (in watts) as explained on TDS 3.
22. Execute command [18] PLL POWER to change from PLLO#2 to PLLO#1. Allow the instrument to stabilize for a minimum of two minutes.

23. Adjust the external power supply to 28.0 ± 0.5 Vdc.
24. Turn the unit off by executing [9] MODULE POWER = DISCONNECT.

3.2.4.2.1.3 Instrument feedback test. Instrument feedback test will be performed in the EMI/RFI chamber using EMI/RFI test procedure AE-26151/5.

3.2.4.2.1.4 Transient susceptibility and power quality tests. The power tests that follow will demonstrate the AMSU-A1 instrument will operate within specified parameters when the transients (low and high frequency) are applied directly to the power lines.

3.2.4.2.1.4.1 Equipment setup. Set up the test equipment and connect to the instrument as shown in Figure 7.

3.2.4.2.1.4.2 Low frequency load induced transients. The AMSU instrument shall be capable of normal operation before and after positive and negative transients are injected into the power line at the amplitude and duration specified in Figure 8. Perform the Low Frequency Load Induced Transients test as follows:

1. With the exception of the external power supply, turn ON all the test equipment.
2. Place the signal generator in ARB 0 mode. With the external power supply OFF, while monitoring the oscilloscope, adjust the amplitude and frequency output of the signal generator to attain the signal characteristics as shown in Figure 8.
3. Remove the signal generator output connection from the power supply. While monitoring the external power supply dc voltage with the meter, turn the external power supply ON.
4. Turn the instrument ON and place the instrument in the modes congruent with paragraph 3.2.3.5.
5. Acquire one Full Scan Mode printout; verify the printout meets the requirements of TDS 19 thru 22. Attach printouts to TDS 51.
6. Connect the signal generator to the external power supply. Wait for the instrument to complete three scans. Remove the signal generator output from the power supply.
7. Acquire one Full Scan Mode printout; verify the printout meets the requirements of TDS 19 thru 22. Attach printouts to TDS 51.
8. Record any deviations in the functional performance of the AMSU instrument on TDS 51.

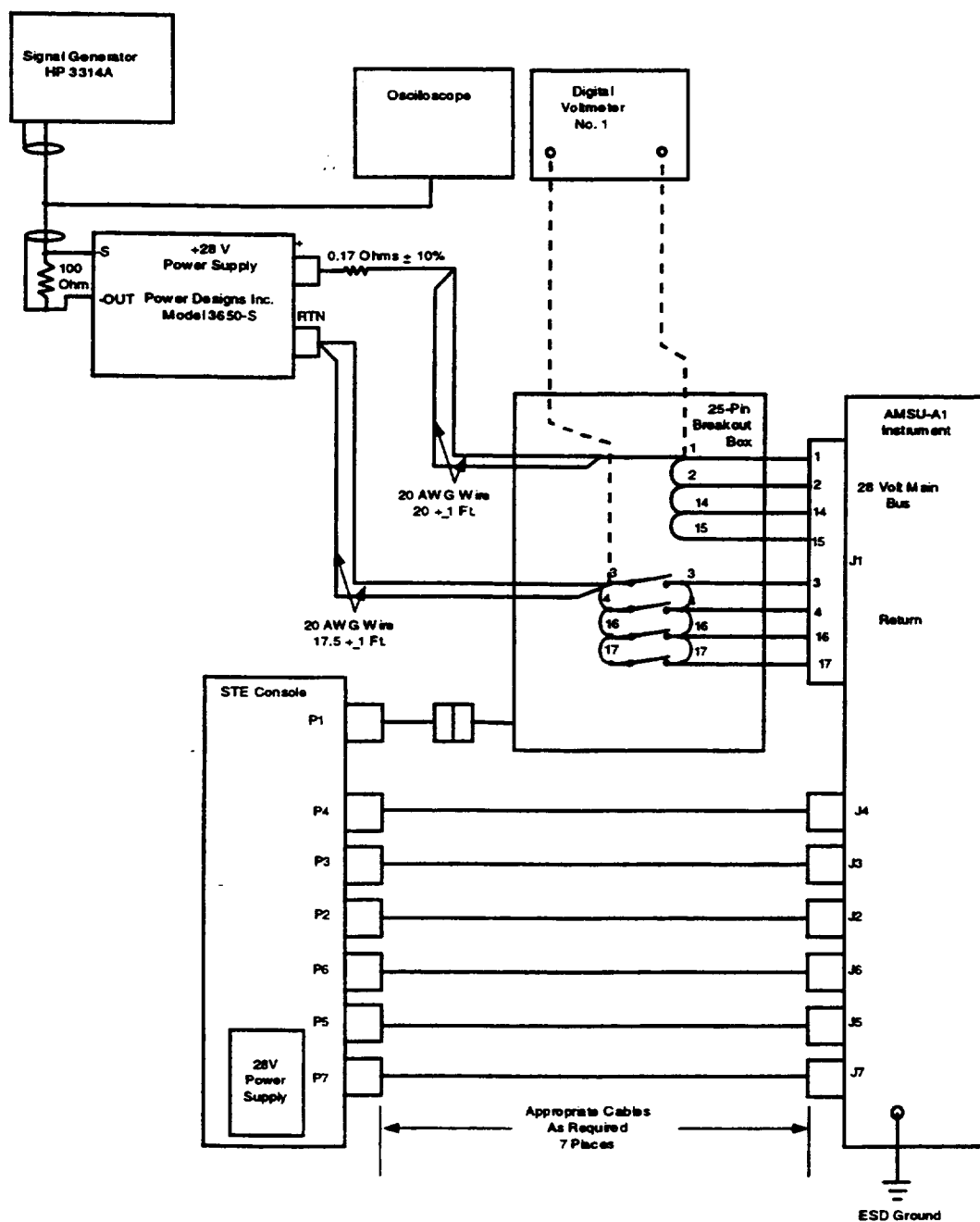
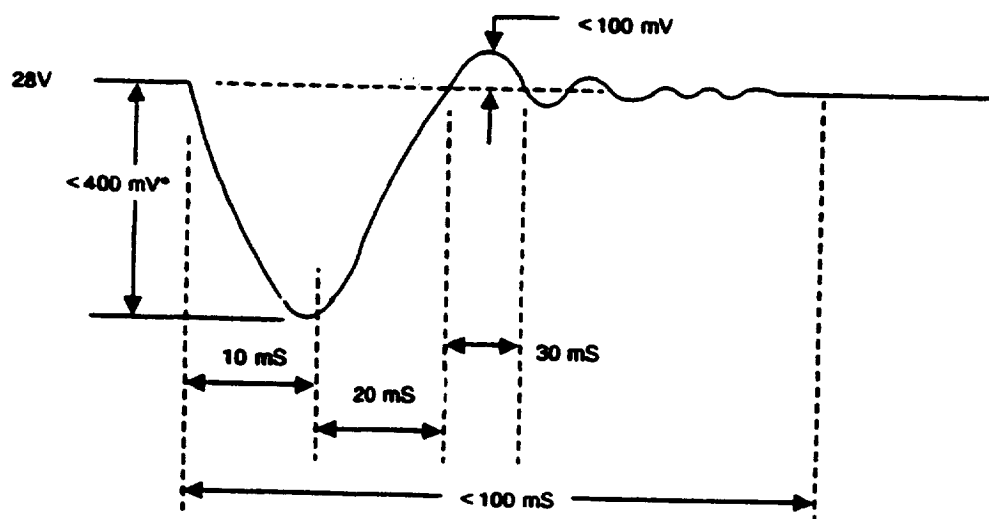


Figure 7. +28 V MLB Transient Susceptibility and Power Quality Test Setup



* Typical transients occurring a number of times per orbit are on the order of 200 mV zero-to-peak for a 1.5A load change.

Figure 8. Load Induced Transient (Main Bus)

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3.2.4.2.1.4.3 High frequency load induced transients. The AMSU instrument shall be capable of normal operation before and after positive and negative transients are injected into the power line. The interfering frequencies are simulated by using the triangular wave output of the signal generator. There are three signals to be sequentially injected; the frequencies and amplitudes as produced by the signal generator and measured by the oscilloscope are:

<u>Frequency (Hz)</u>	<u>Amplitude</u>
1.43	200 mVpp
2.86	1.00 Vpp
6.67	1.50 Vpp

Tolerance on the above values is $\pm 10\%$.

Perform High Frequency Load Induced Transients as follows:

1. With the exception of the external power supply, turn ON all the test equipment.
2. With the external power supply OFF, while monitoring the oscilloscope, adjust the amplitude and frequency output of the signal generator output as follows:

amplitude	200 mVpp
offset	0.000 V
frequency	1.430 Hz
3. Remove the signal generator output connection from the power supply. While monitoring the external power supply dc voltage with the meter, turn the external power supply ON.
4. Turn the instrument ON and place the instrument in the modes congruent with paragraph 3.2.3.5.
5. Acquire one Full Scan Mode printout; verify the printout meets the requirements of TDS 19 thru 22.
6. Connect the signal generator to the external power supply. Wait for the instrument to complete three scans. Remove the signal generator output from the power supply.
7. Acquire one Full Scan Mode printout; verify the printout meets the requirements of TDS 19 thru 22.
8. Repeat steps 2-4 and 6-7 for 2.86 Hz and 1.0 Vpp.
9. Repeat steps 2-4 and 6-7 for 6.67 Hz and 1.5 Vpp.
10. Record any deviations in the functional performance of the AMSU instrument on TDS 51.

3.2.4.2.2 +28 V pulse load bus test

3.2.4.2.2.1 PLB during the first two seconds. The PLB operation, during the first two seconds, shall be verified as follows:

1. Configure the unit and test equipment as indicated in Figure 9. Obtain DSA trigger from J2-7. Verify that switches 5, 6, 18 and 19 of the breakout box are in the OPEN position.
2. Disconnect +28 Vdc external power supply output and adjust the power supply to read 28.00 ± 0.05 Vdc by using DVM. Re-connect power supply output as shown in Figure 9.

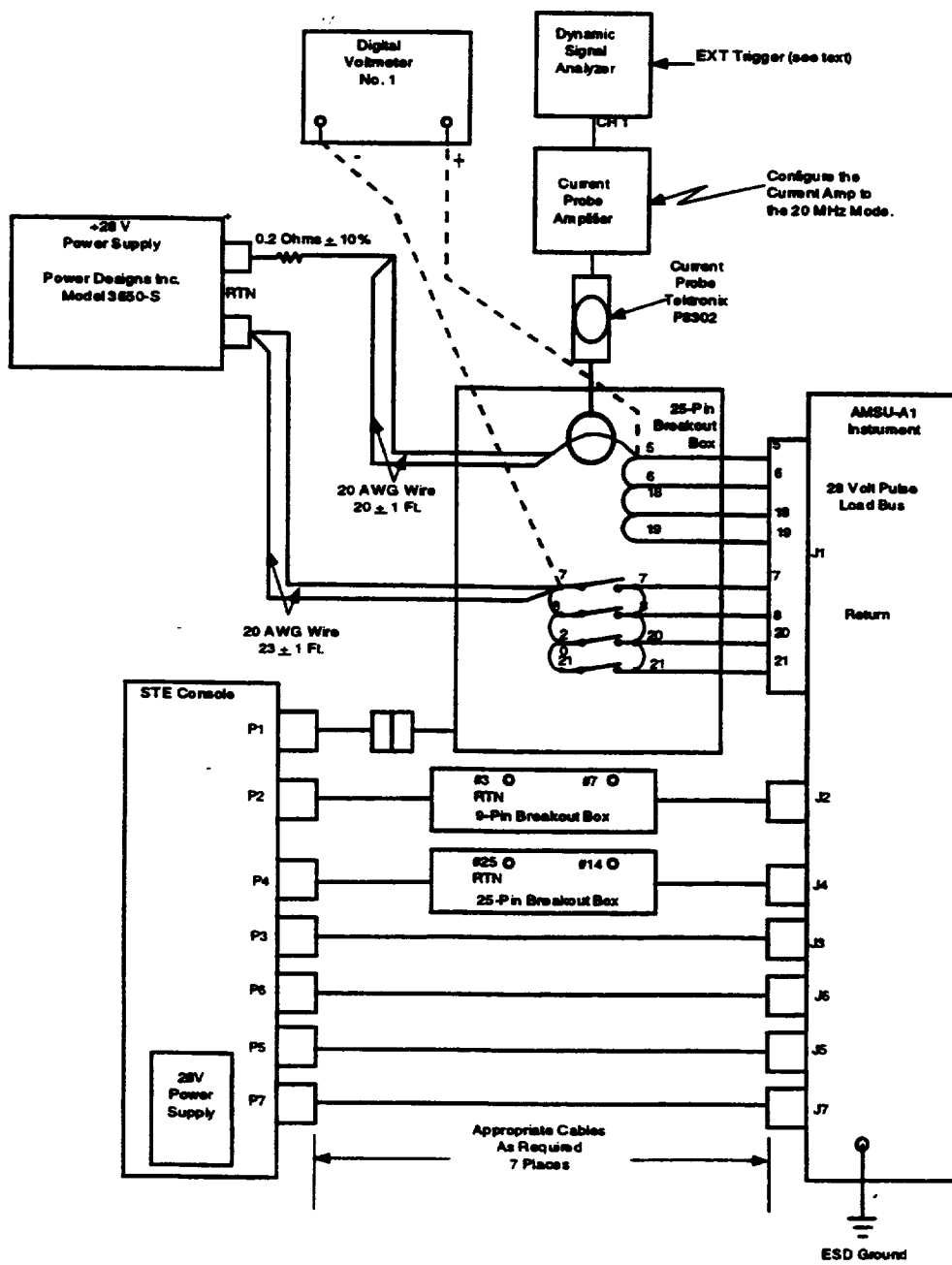


Figure 9. +28 V Pulse Load Verification Setup

3. Configure the dynamic signal analyzer as follows:

Select MEAS MODE	Select INPUT COUPLE
Select <i>Time Capture</i>	Select <i>CH1 DC</i>
Select <i>Capture Select</i>	Select <i>CH1 Ground</i>
Select <i>Capture Length</i> ; Enter <i>1</i> ; Select <i>Record</i>	Select INPUT TRIG
Select FREQ	Select <i>Trig Level</i> ; Enter <i>1.5</i> ; Select <i>V</i>
Select <i>Freq Span</i> ; Enter <i>100</i> ; Select <i>Hz</i>	Select <i>Arm AU</i>
Select <i>E SMPL Off</i>	Select <i>Ext</i>
Select <i>Time Length</i> ; Enter <i>8.0</i> ; Select <i>Sec</i>	Select <i>Slope -</i>
Select SELECT MEAS	Select TRIG DELAY
Select <i>Power Spec</i>	Enter <i>0.0</i> ; Select <i>Sec</i>
Select <i>CH1 Active</i>	Select COORD
Select WINDOW	Select <i>Real</i>
Select <i>Hann</i>	Select VIEW INPUT
Select SOURCE	Select <i>Time Buff</i>
Select <i>Source Off</i>	Select SCALE
Select AVG	Select <i>X Fixd Scale</i> ; Enter <i>0.0, 8.0</i> ; Select <i>Sec</i>
Select <i>Avg Off</i>	Select <i>Y Fixd Scale</i> ; Enter <i>-10.0, 70.0</i> ; Select <i>mV</i>
Select <i>Tim Av Off</i>	Select UNITS
Select RANGE	Select <i>Hz (sec)</i>
Select <i>Aut 1 Rng up</i>	

NOTE

Prior to collecting any current data, the current meter and DSA have to be "zeroed out"; zero current reference has to be established on the DSA. Follow this interim procedure to zero reference the current meter and DSA.

- a) Select 200 mA/10mV per div. on the current amplifier.
- b) Remove the current probe from the circuit and close the probe. Place the probe in a magnetic benign location.
- c) Adjust the "y" axis voltage range to ± 4 mV.
- d) Place the DSA in "Free Run" Trigger and depress "Start Capture" on the DSA.
- e) With the "capture in process", adjust the "output DC level" control on the current amplifier to indicate zero current on the DSA.
- f) Position the current probe to its original location in accordance with Figure 9, and return the DSA to "Ext" trigger.

The instrument is now ready to capture and plot 8 seconds of data.

4. Adjust external power supply for +28 Vdc. Turn the unit ON by selecting [9] MODULE POWER, set up the operating modes as defined in paragraph 3.2.3.5 (reference the command screen parameters below). If necessary, re-adjust the external power supply for 28 Vdc.

COMMANDS			
[9] MODULE POWER =	CONNECT	ANTENNA IN COLD CAL POS =	NO [15]
[10] SURVIVAL HTR PWR =	OFF	ANTENNA IN NADIR POS=	NO [16]
[11] MODULE TOTALLY OFF =	ON	ANTENNA FULL SCAN MODE =	YES [17]
[12] SCANNER A1-1 POWER =	ON	PLL POWER =	PLLO#1 [18]
[13] SCANNER A1-2 POWER =	ON	COLD CAL POSITION MSB =	ZERO [19]
[14] ANTENNA WARM CAL POS =	NO	COLD CAL POSITION LSB =	ZERO [20]
POWER [4] ON			

5. Start the DSA signal capture by depressing "Start Capture".
6. Obtain the first 2 second PLB current waveform by selecting 0 to 2 seconds time span. Refer to Figure 10 for a typical waveform. Turn OFF the "X" cursor if it is ON. Turn the "X" cursor ON. The cursor will appear at the highest peak. Ensure this value is less than or equal to 1.3 amps. Record value on TDS 4.
7. Compute the peak current as follows:
Multiply the maximum Y value by the current/div as selected on the current amplifier. As an example, if the current amplifier is set up to display 200 mA/10 mV per division, and the maximum Y value = 276 mV:

$$60 \text{ mV} \times (200 \text{ mA}/10 \text{ mV}) = 1200 \text{ mA} = 1.20 \text{ amps}$$

3.2.4.2.2.2 PLB measured from 2 to 4 seconds. The PLB operation, from 2 to 4 seconds, shall be verified as follows:

1. Reset the dynamic analyzer in accordance with 3.2.4.2.2.1(2).
2. Change the PRE-TRIGGER DELAY setting of the dynamic signal analyzer to 1.9 seconds.
3. Obtain a hard copy of the signal displayed on the dynamic signal analyzer (refer to Figure 10 for typical waveform).
4. From the hard copy obtained in step 3, calculate the peak current. Record the peak current and bus current values during the integrate/hold, dump (I/H, D) time period (refer to Figure 10) on TDS 4.

3.2.4.2.2.3 PLB measured from 4 to 6 seconds. The PLB operation, from 4 to 6 seconds, shall be verified as follows:

1. Reset the dynamic analyzer in accordance with 3.2.4.2.2.1(2).
2. Change the PRE-TRIGGER DELAY setting of the dynamic signal analyzer to 3.9 seconds.
3. Obtain a hard copy of the signal displayed on the dynamic signal analyzer (refer to Figure 10 for typical waveform).
4. From the hard copy obtained in step 3, calculate the peak current. Record the peak current and bus current values during the integrate/hold, dump (I/H, D) time period (refer to Figure 10) on TDS 4.

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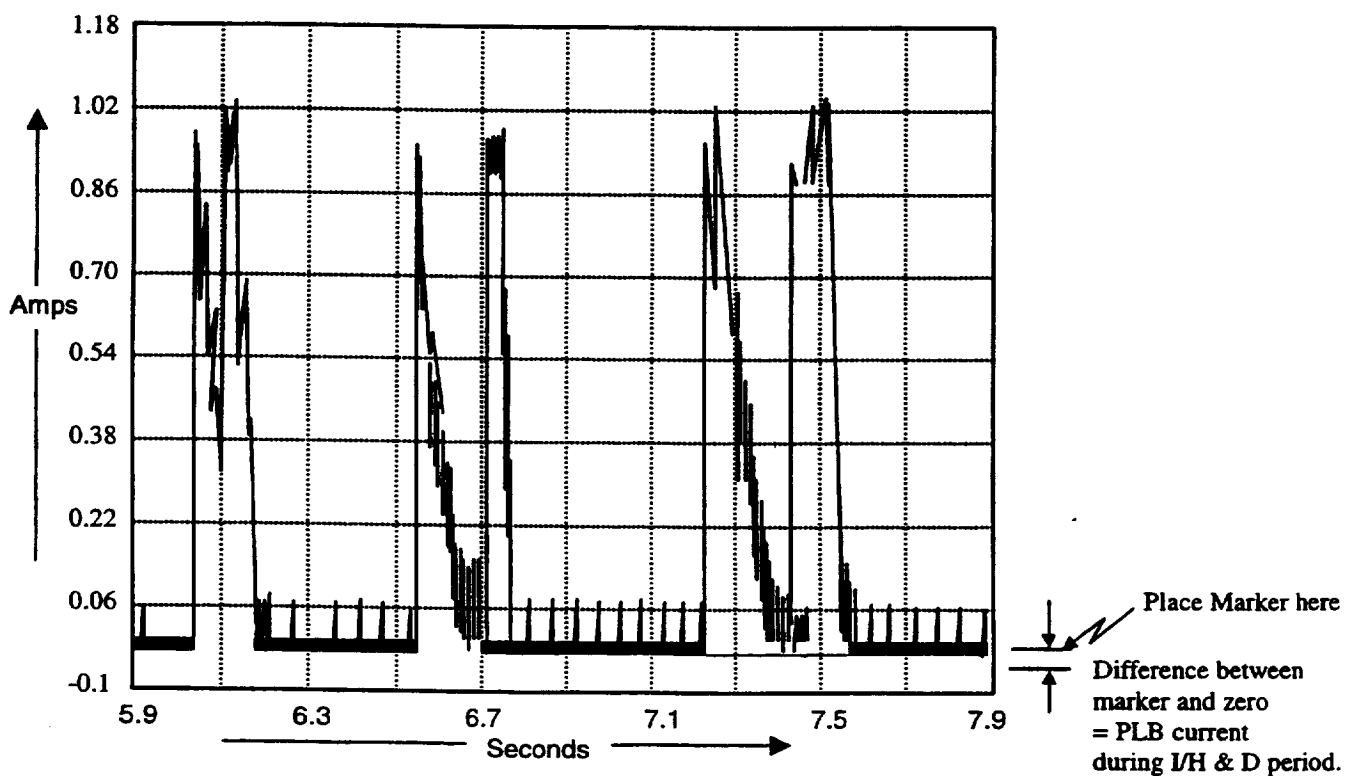
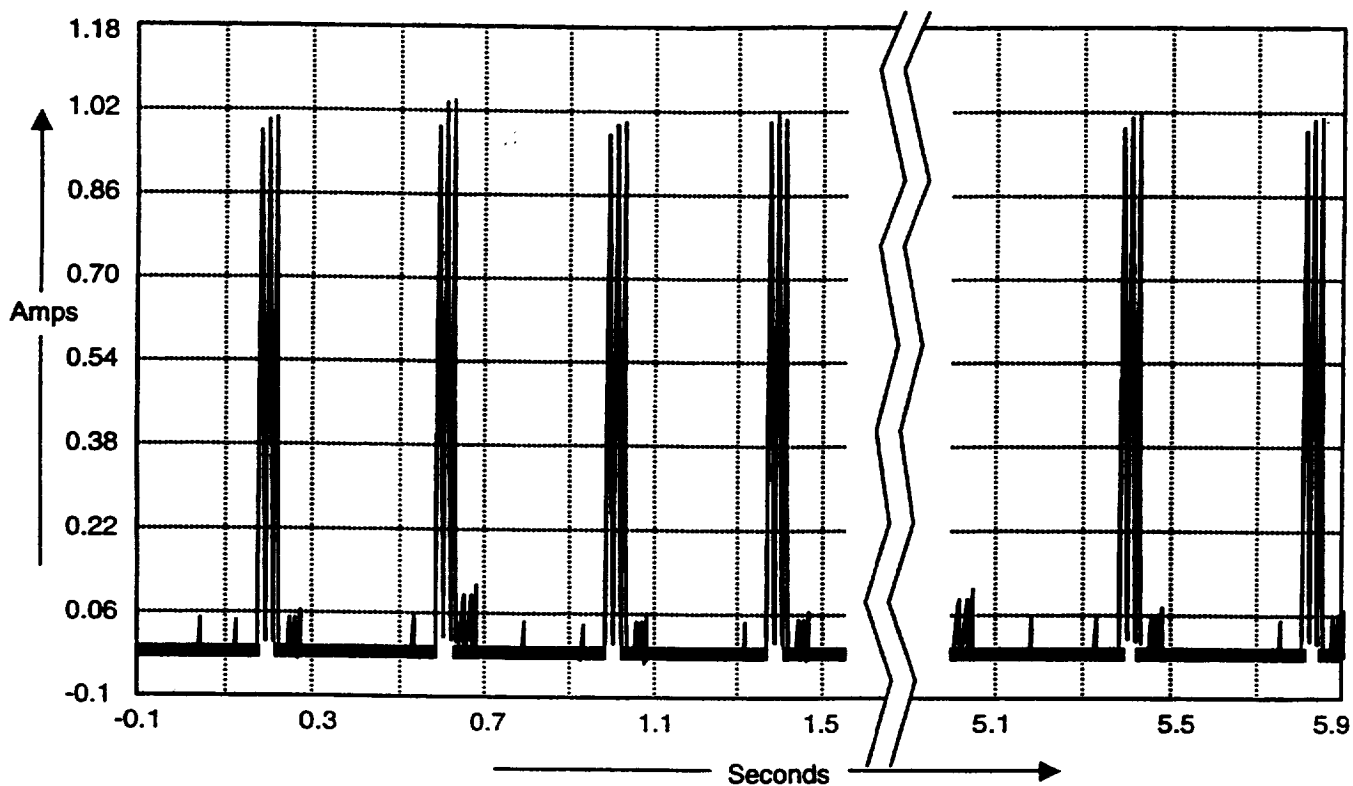


Figure 10. Typical Load Current Waveforms from the +28 V Pulse Load Bus

3.2.4.2.2.4 PLB measured from 6 to 8 seconds. The PLB shall be measured as follows:

1. Reset the dynamic analyzer in accordance with 3.2.4.2.2.1(2).
2. Change the PRE-TRIGGER DELAY setting of the dynamic signal analyzer to 5.9 seconds.
3. Obtain a hard copy of the signal displayed on the dynamic signal analyzer.
4. From the hard copy obtained in step 3, calculate the peak current. Record the peak current and bus current values during the integrate/hold, dump (I/H, D) time period (refer to Figure 10) on TDS 4.

3.2.4.2.2.5 Eight second integrated current measurement. To observe the PLB integrated (8 sec.) current waveform on the dynamic signal analyzer, configure the dynamic signal analyzer as follows:

Select **SCALE**

Select X Fixd Scale; Enter 0.0, 8; Select Sec
Select Y Fxd Scale; Enter -10, 70; Select mV

Select **VIEW INPUT**

Select Time Record: Note - the display heading changes to read "Cap Tim Rec"

Select **MATH**

Select Next

Select **Intgrt:**

Note - the display changes to present an integrated value of the current waveform.

Select **X (cursor)**

Move the X marker to the maximum right of the display. The Y value is indicative of the integrated current value over the entire 8 second period (in amp-sec).

Multiply the maximum Y value by the current/div as selected on the current amplifier, then divide by 8 seconds to acquire the average current value. As an example: if the current amplifier is set up to display 200 mA/10 mV per division, and the maximum Y value = 32.4 mV-sec:

$$[32.4 \text{ mV-sec} \times (200 \text{ mA}/10 \text{ mV})]/8 \text{ sec} = 81 \text{ mA}$$

Enter the calculated integrated value on TDS 4.

3.2.4.2.2.6 PLB turn-on transient

1. Configure the unit and test equipment as shown in Figure 9. Obtain DSA trigger from J4-14. Verify that switches 5, 6, 18 and 19 of the breakout box are in the OPEN position.
2. Configure the Dynamic Signal Analyzer (DSA) as follows:

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Select MEAS MODESelect *Time Capture*Select *Capture Select*Select *Capture Length*; Enter 500.0; Select *msec***Select FREQ**Select *Freq Span*; Enter 20; Select *kHz*Select *E SMPL Off*Select *Time Length*; Enter 32.0;Select *msec***Select SELECT MEAS**Select *Power Spec*Select *CH1 Active***Select WINDOW**Select *Hann***Select SOURCE**Select *Source Off***Select AVG**Select *Avg Off*Select *Tim Av Off***Select RANGE**Select *Chan 1 Range*; Enter 1; Select *V***Select INPUT COUPLE**Select *CH1 DC*Select *CH1 Ground***Select INPUT TRIG**Select *Trig Level*; Enter 1; Select *V*Select *Arm AU*Select *Extenal*Select *Ext*; Select *Slope(-)***Select TRIG DELAY**Enter 0; Select *µSec***Select COORD**Select *Real***Select VIEW INPUT**Select *Time Buff***Select SCALE**Select *X Fixd Scale*; Enter 0.0, 25Select *msec*Select *Y Fixd Scale*; Enter -10, 470Select *mV***Select UNITS**Select *Hz (sec)***NOTE**

Prior to collecting any current data, the current meter and DSA have to be "zeroed out"; zero current reference has to be established on the DSA. Follow this interim procedure to zero reference the current meter and DSA.

- a) Select 200 mA/10mV per div. on the current amplifier.
- b) Remove the current probe from the circuit and close the probe. Place the probe in a magnetic benign location.
- c) Adjust the "y" axis voltage range to ± 4 mV.
- d) Place the DSA in "Free Run" Trigger and depress "Start Capture" on the DSA.
- e) With the "capture in process", adjust the "output DC level" control on the current amplifier to indicate zero current on the DSA.
- f) Position the current probe to its original location in accordance with Figure 9, and return the DSA to "Ext" trigger.

3. Adjust external power supply for +28 Vdc. Turn the unit ON by selecting [9] MODULE POWER; set up the operating modes as defined in paragraph 3.2.3.5 (reference the command screen parameters below). If necessary, re-adjust the external power supply for 28 Vdc.

COMMANDS			
[9] MODULE POWER =	CONNECT	ANTENNA IN COLD CAL POS =	NO [15]
[10] SURVIVAL HTR PWR =	OFF	ANTENNA IN NADIR POS=	NO [16]
[11] MODULE TOTALLY OFF =	ON	ANTENNA FULL SCAN MODE =	YES [17]
[12] SCANNER A1-1 POWER =	ON	PLL POWER =	PLLO#1 [18]
[13] SCANNER A1-2 POWER =	ON	COLD CAL POSITION MSB =	ZERO [19]
[14] ANTENNA WARM CAL POS =	NO	COLD CAL POSITION LSB =	ZERO [20]
POWER [4] ON			

4. Turn the unit OFF by executing command [9] MODULE POWER. Confirm the command has been executed on the STE display.
5. Start the DSA signal capture by depressing "Start Capture"; wait for the DSA message "waiting for trigger" before proceeding.
6. On the STE computer, select [9] MODULE POWER and obtain a record of the +28 PLB Turn on current waveform. On the STE computer, select [9] MODULE POWER to turn the instrument's power OFF. Adjust the display time base and voltage sensitivity to allow for adequate current and pulse duration measurements. Plot the obtained waveform and attach a hard copy of the scan to TDS 4. Refer to Figure 11 for an example of the expected waveform.
7. Measure the Turn-On pulse width; record this value on TDS 4.
8. Compute the peak current as follows:

Measure the maximum Y value by the current/div as selected on the current amplifier. As an example, if the current amplifier is set up to display 200 mA/10 mV per division, and the maximum Y value = 276 mV:

$$276 \text{ mV} \times (200 \text{ mA}/10 \text{ mV}) = 5520 \text{ mA} = 5.52 \text{ amps}$$

Record this value on TDS 4.

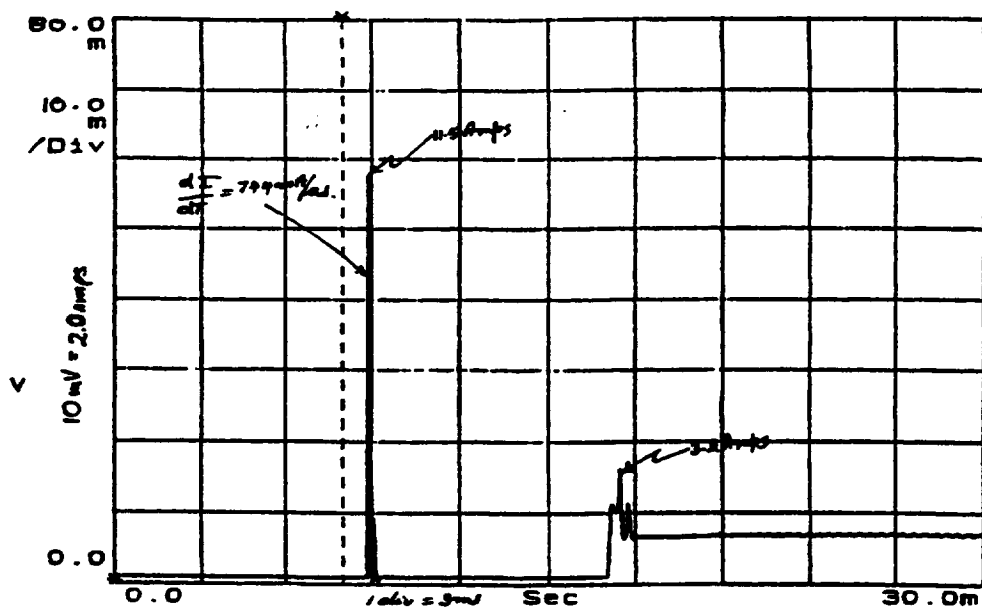
9. The 1st derivative of the current waveform must be calculated. Compute the dI/dT as follows:

The most probable location of the greatest current demand is during the first positive transition after voltage application. If this is the case, expand the segment of the display and measure the greatest voltage transition in the smallest time transition. The change in voltage times the current/div as selected on the current amplifier produces the change in current. Next divide this change in current by the change in time (in microseconds). This value is dI/dT. Example:

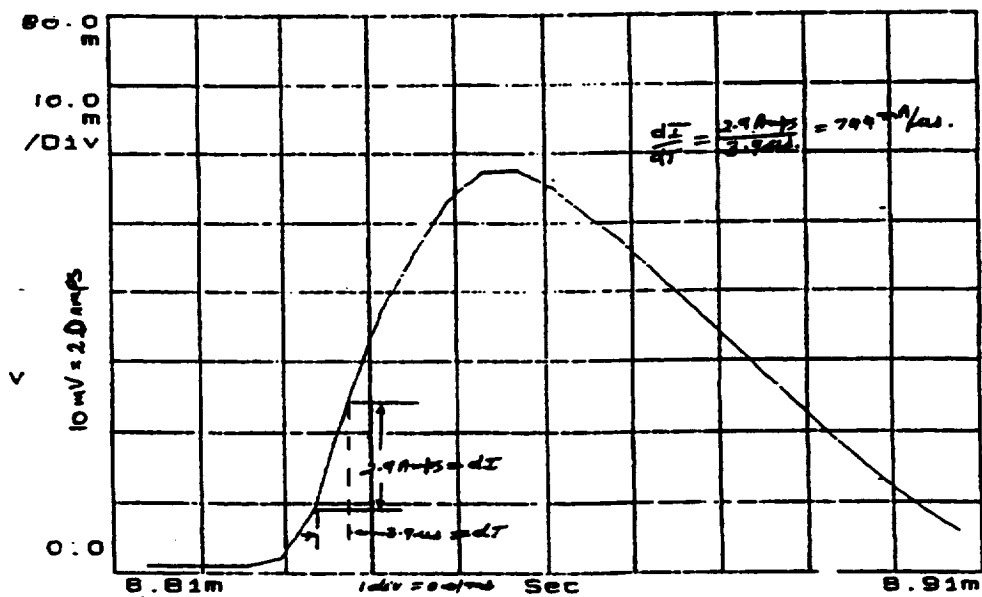
Change in voltage 144 mV
Change in time (microseconds)..... 19.5 μ s
Current/div on current amplifier 200 mA/10 mV

$$144 \text{ mV} \times (200 \text{ mA}/10 \text{ mV})/19.5 \mu\text{s} = 147.7 \text{ mA}/\mu\text{s}$$

10. Record the computed value on TDS 4.



AMSU-A1 PLB Worst Case Transient



AMSU-A1 PLB $\frac{dI}{dt}$ Worst Case Transient

Figure 11. +28V Pulse Load Bus Turn-on Transient

3.2.4.2.2.7 PLB current in warm cal, cold cal and Nadir mode

1. Place instrument in Warm Cal mode.
2. Measure and record PLB steady state current on TDS 4 with a multimeter in the Current mode.
3. Repeat step 2 after placing instrument in Cold Cal mode.
4. Repeat step 2 after placing instrument in Nadir mode.
5. Repeat step 2 after placing instrument in Warm Calm mode and commanding both motors off.
6. After stabilizing for a minimum of 20 scans, acquire one Full Scan mode printout, and attach it to TDS 4.

3.2.4.2.2.8 Instrument feedback test (PLB). Instrument feedback test will be performed in the EMI/RFI chamber using EMI/RFI test procedure AE-26151/5.

3.2.4.2.2.9 Transient susceptibility and power quality tests. The tests that follow will demonstrate the AMSU-A1 instrument will operate within specified parameters when the transients (low and high frequency) are applied directly to the power lines.

3.2.4.2.2.9.1 Equipment setup. Set up the test equipment and connect to the instrument as shown in Figure 12.

3.2.4.2.2.9.2 Low frequency load induced transients. The AMSU instrument shall be capable of normal operation before and after positive and negative transients are injected into the Pulse Load Bus power line at the amplitude and duration specified in Figure 13. Perform the Low Frequency Load Induced Transients as follows:

1. With the exception of the external power supply, turn ON all the test equipment.
2. Place the signal generator in ARB 1 mode. With the external power supply OFF, while monitoring the oscilloscope, adjust the amplitude and frequency output of the signal generator to attain the signal characteristics as shown in Figure 13.
3. Remove the signal generator output connection from the power supply. While monitoring the external power supply dc voltage with the meter, turn the external power supply ON.
4. Turn the instrument ON and place the instrument in the modes congruent with paragraph 3.2.3.5.
5. Acquire one (1) Full Scan Mode printout; verify the printout meets the requirements of TDS 19 thru 22. Attach printouts to TDS 51.
6. Connect the signal generator to the external power supply. Wait for the instrument to complete three (3) scans. Remove the signal generator output from the power supply.
7. Acquire one (1) Full Scan Mode printout; verify the printout meets the requirements of TDS 19 thru 22. Attach printouts to TDS 51.
8. Record any deviations in the functional performance of the AMSU instrument on TDS 51.



Figure 12. +28V PLB Transient Susceptibility and Power Quality Tests Setup

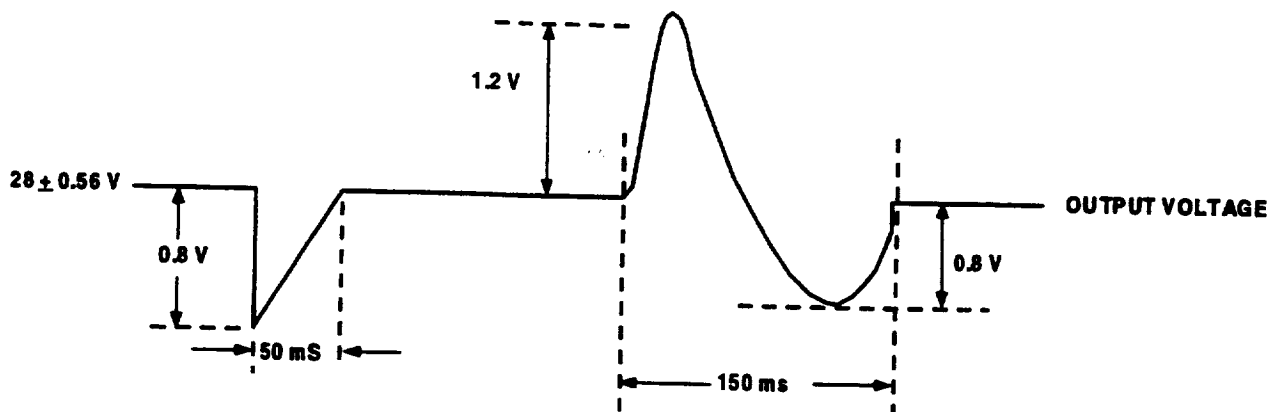


Figure 13. Load Induced Transient (Pulse Load)

3.2.4.2.2.9.3 High frequency load induced transients. The AMSU instrument shall be capable of normal operation before and after positive and negative transients are injected into the power line. The interfering frequencies are simulated by using the triangular wave output of the signal generator. There are three signals to be sequentially injected; the frequencies and amplitudes as produced by the signal generator and measured by the oscilloscope are:

<u>Frequency (Hz)</u>	<u>Amplitude</u>
1.43	200 mVpp
2.86	1.00 Vpp
6.67	1.50 Vpp

Tolerance on the above values is $\pm 10\%$.

Perform the High Frequency Load Induced Transients as follows:

1. With the exception of the external power supply, turn ON all the test equipment.
2. With the external power supply OFF, while monitoring the oscilloscope, adjust the amplitude and frequency output of the signal generator output as follows:

amplitude	200 mVpp
offset	0.000 V
frequency	1.430 Hz
3. Remove the signal generator output connection from the power supply. While monitoring the external power supply dc voltage with the meter, turn the external power supply ON.
4. Turn the instrument ON and place the instrument in the modes congruent with paragraph 3.2.3.5.
5. Acquire one (1) Full Scan Mode printout; verify the printout meets the requirements of TDS 19 thru 22.
6. Connect the signal generator to the external power supply. Wait for the instrument to complete three (3) scans. Remove the signal generator output from the power supply.
7. Acquire one (1) Full Scan Mode printout; verify the printout meets the requirements of TDS 19 thru 22.
8. Repeat steps 2-4 and 6-7 for 2.86 Hz and 1.0 Vpp.
9. Repeat steps 2-4 and 6-7 for 6.67 Hz and 1.5 Vpp.

10. Record any deviations in the functional performance of the AMSU instrument on TDS 51.

3.2.4.2.3 Analog telemetry bus

3.2.4.2.3.1 Operating power measurements. The purpose of this test is to calculate the operating power of the Analog Telemetry Bus from measurements taken of the bus voltage and current.

1. Configure the instrument as shown in Figure 14.
2. Turn the instrument ON and place the instrument in the modes congruent with paragraph 3.2.3.5.
3. Measure the bus current and record on TDS 5.
4. From the measurements recorded on TDS 5, calculate the operating power for the telemetry bus and record on TDS 5.

3.2.4.2.3.2 Instrument feedback test (ATB). Instrument feedback test will be performed in the EMI/RFI chamber using EMI/RFI test procedure AE-26151/5.

3.2.4.2.3.3 Transient susceptibility and power quality tests (ATB). The tests that follow will demonstrate the AMSU-A1 instrument will operate within specified parameters when the transients (low and high frequency) are applied directly to the power lines.

3.2.4.2.3.3.1 Equipment setup. Set up the test equipment and connect to the instrument as shown in Figure 15 (exceptions: remove the current probe and amplifier; connect the oscilloscope to monitor output of the signal generator).

3.2.4.2.3.3.2 Low frequency load induced transients. The AMSU instrument shall be capable of normal operation before and after positive and negative transients are injected into the power line at the amplitude and duration specified in Figure 16. Perform the Low Frequency Load Induced Transients as follows:

1. With the exception of the external power supply, turn ON all the test equipment.
2. Place the signal generator in ARB 0 mode. With the external power supply OFF, while monitoring the oscilloscope, adjust the amplitude and frequency output of the signal generator to attain the signal characteristics as shown in Figure 16.
3. Remove the signal generator output connection from the power supply. While monitoring the external power supply dc voltage with the meter, turn the external power supply ON.
4. Turn the instrument ON and place the instrument in the modes congruent with paragraph 3.2.3.5.
5. Acquire one (1) Full Scan Mode printout; verify the printout meets the requirements of TDS 19 thru 22. Attach printouts to TDS 51.
6. Connect the signal generator to the external power supply. Wait for the instrument to complete three (3) scans. Remove the signal generator output from the power supply.
7. Acquire one (1) Full Scan Mode printout; verify the printout meets the requirements of TDS 19 thru 22. Attach printouts to TDS 51.
8. Record any deviations in the functional performance of the AMSU instrument on TDS 51.

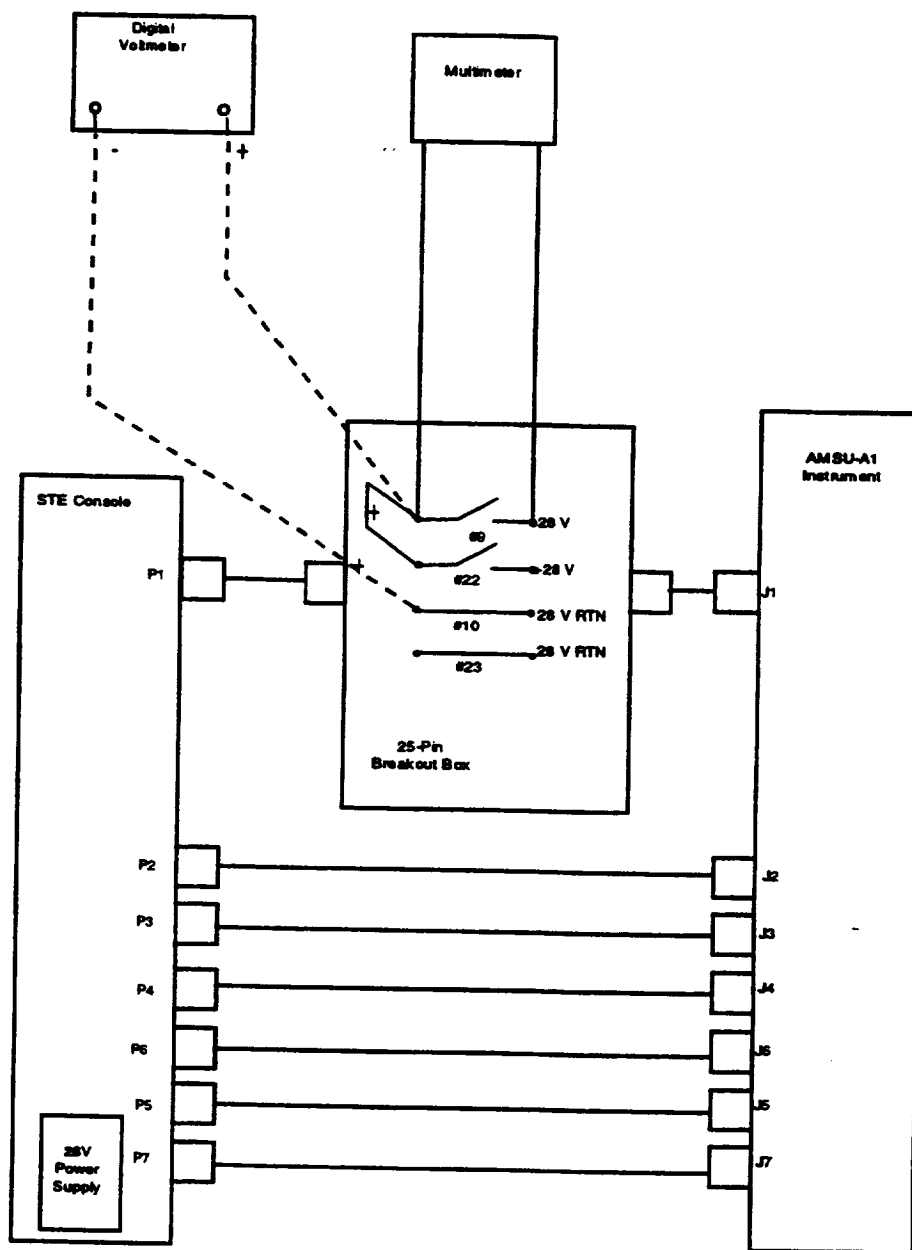


Figure 14. +28V Analog Telemetry Bus Test Setup

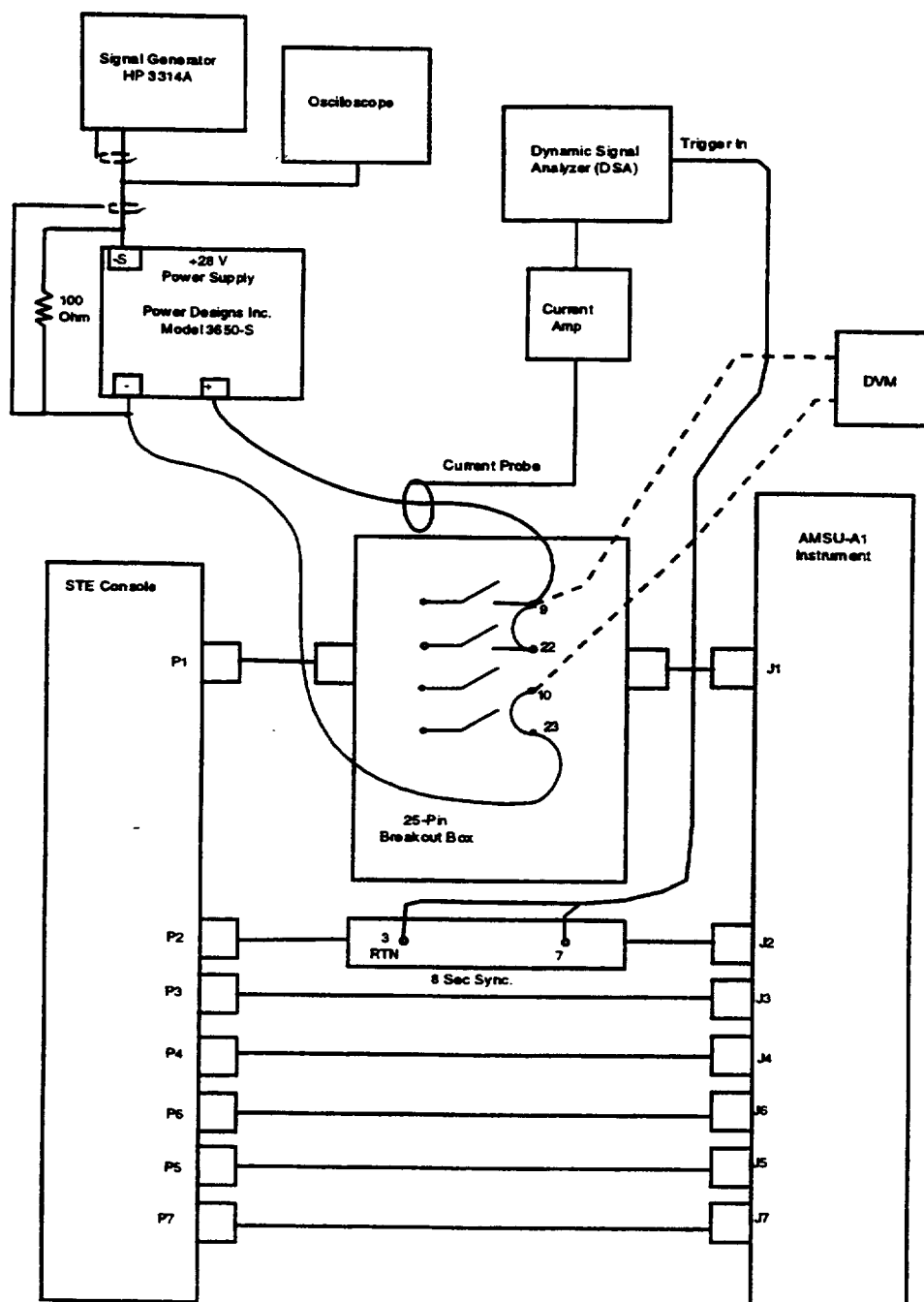
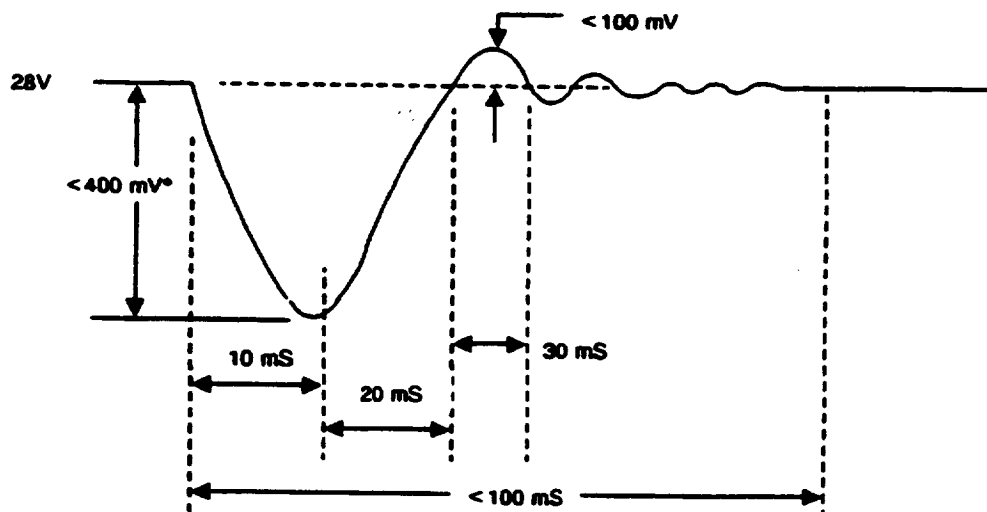


Figure 15. +28 Vdc Analog Telemetry Bus Ripple Current and Transient Susceptibility Test Setup



* Typical transients occurring a number of times per orbit are on the order of 200 mV zero-to-peak for a 1.5A load change.

Figure 16. Load Induced Transient (Main Bus)

3.2.4.2.3.3 High frequency load induced transients. The AMSU instrument shall be capable of normal operation before and after positive and negative transients are injected into the power line. The interfering frequencies are simulated by using the triangular wave output of the signal generator. There are three signals to be sequentially injected; the frequencies and amplitudes as produced by the signal generator and measured by the oscilloscope are:

Frequency (Hz)	Amplitude
1.43	200 mVpp
2.86	1.00 Vpp
6.67	1.50 Vpp

Tolerance on above values is $\pm 10\%$.

Perform the High Frequency Load Induced Transients as follows:

1. With the exception of the external power supply, turn ON all the test equipment.
2. With the external power supply OFF, while monitoring the oscilloscope, adjust the amplitude and frequency output of the signal generator output as follows:

..... amplitude	200 mVpp
offset	0.000 V
frequency	1.430 Hz

3. Remove the signal generator output connection from the power supply. While monitoring the external power supply dc voltage with the meter, turn the external power supply ON.
4. Turn the instrument ON and place the instrument in the modes congruent with paragraph 3.2.3.5.
5. Acquire one (1) Full Scan Mode printout; verify the printout meets the requirements of TDS 19 thru 22.
6. Connect the signal generator to the external power supply. Wait for the instrument to complete three (3) scans. Remove the signal generator output from the power supply.

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7. Acquire one (1) Full Scan Mode printout; verify the printout meets the requirements of TDS 19 thru 22.
8. Repeat steps 2-4 and 6-7 for 2.86 Hz and 1.0 Vpp.
9. Repeat steps 2-4 and 6-7 for 6.67 Hz and 1.5 Vpp.
10. Record any deviations in the functional performance of the AMSU instrument on TDS 51.

3.2.4.2.4 +10 volt interface bus test

3.2.4.2.4.1 Operating power measurements. The purpose of this test is to calculate the operating power of the +10 Vdc Interface Bus from measurements taken of the bus voltage and current.

1. Configure the instrument as shown in Figure 17.
2. Turn the instrument ON and place the instrument in the modes congruent with paragraph 3.2.3.5.
3. Measure the bus current and record on TDS 6.
4. From the measurements recorded on TDS 6, calculate the operating power for the telemetry bus and record on TDS 6.

3.2.4.2.4.2 Instrument feedback test. Instrument feedback test will be performed in the EMI/RFI chamber using EMI/RFI test procedure AE-26151/5.

3.2.4.2.5 Power input test for LPT. For LPT, test the power input as follows:

1. Configure the unit and test equipment as indicated in Figure 18.
2. Turn the unit ON as described in 3.2.3.5. Set the STE power supply voltage at 28.00 ± 0.05 Vdc using 25-pin breakout box and DVM #1.

NOTE

Do not proceed without successful completion of step 2.

3. Record the voltage from DVM #1 and current in Amps from STE current meter on TDS 7.

3.2.4.3 Clock, commands, and data system test. This procedure verifies the clock signal, the commands, and the data requirements specified in S-480-80, GHS IS-3267415, and UHS IS-2617547.

3.2.4.3.1 Test sequence. The test sequence shall be as follows:

- a. Clock signals verification
- b. Commands and Digital-B telemetry verification
- c. Data output verification
 - (1) Digital-A
 - (2) Analog telemetry
 - (3) Test points
- d. GSE modes.

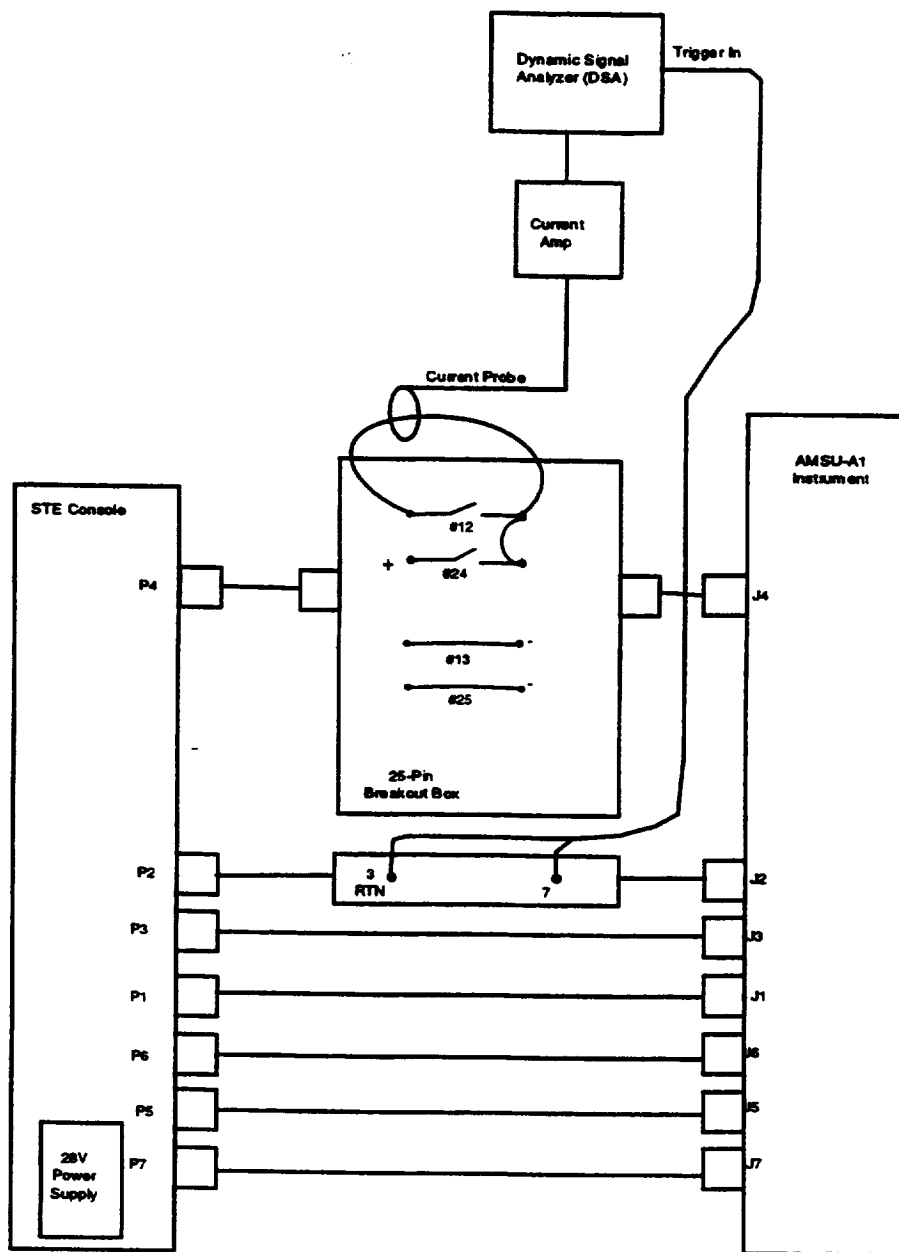


Figure 17. +10V Interface Bus Operating Power and Ripple Current Measurements Test Setup

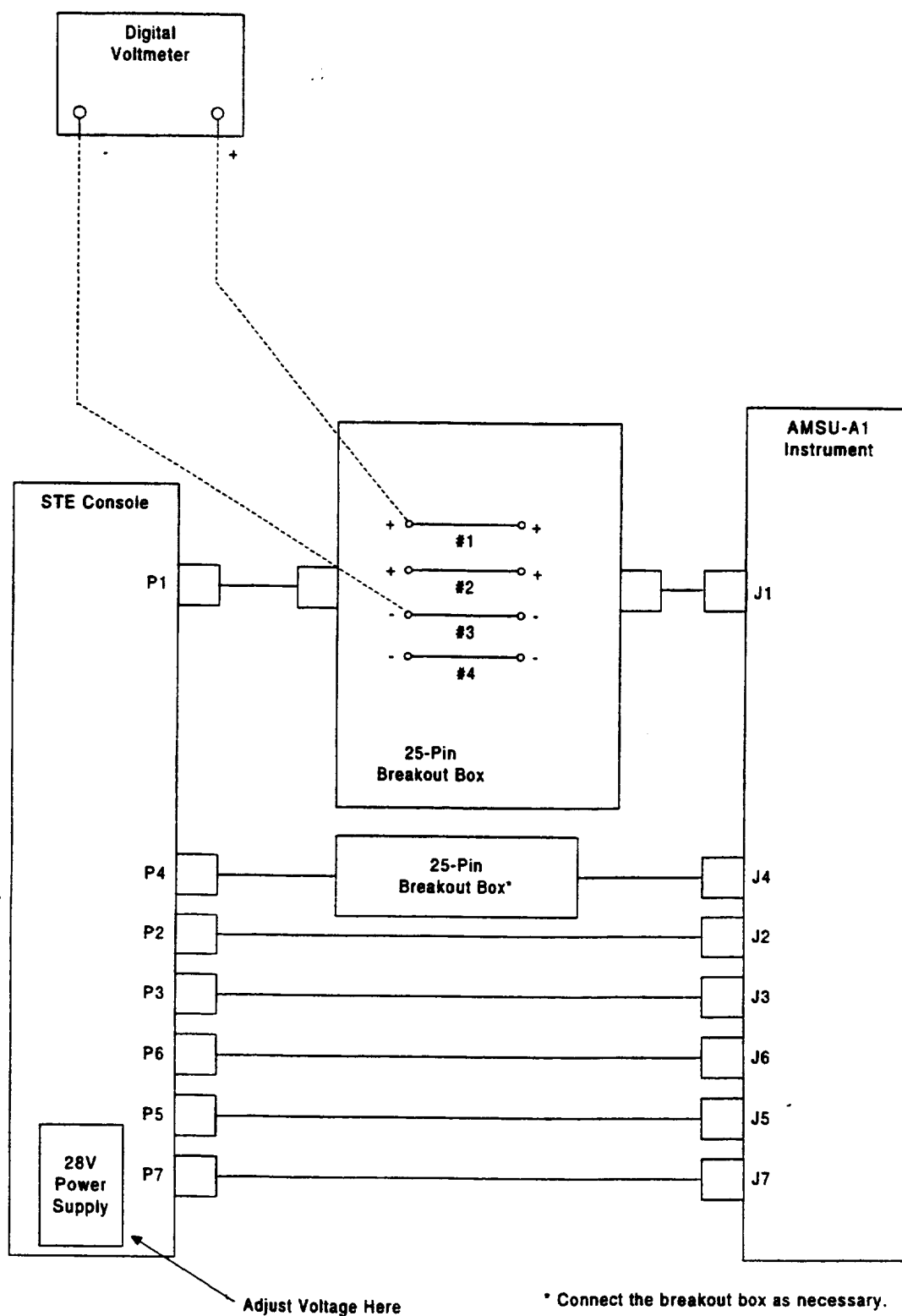


Figure 18. +28 V Main Load Bus Test Setup (For LPT Only)

3.2.4.3.2 Clock signals test. The following items shall be tested to verify the clock signals. Refer to Figure 19 for graphical representation of these pulses.

- 1.248 MHz clock
- 8 seconds frame pulse
- A1 select pulse
- C1 shift pulse

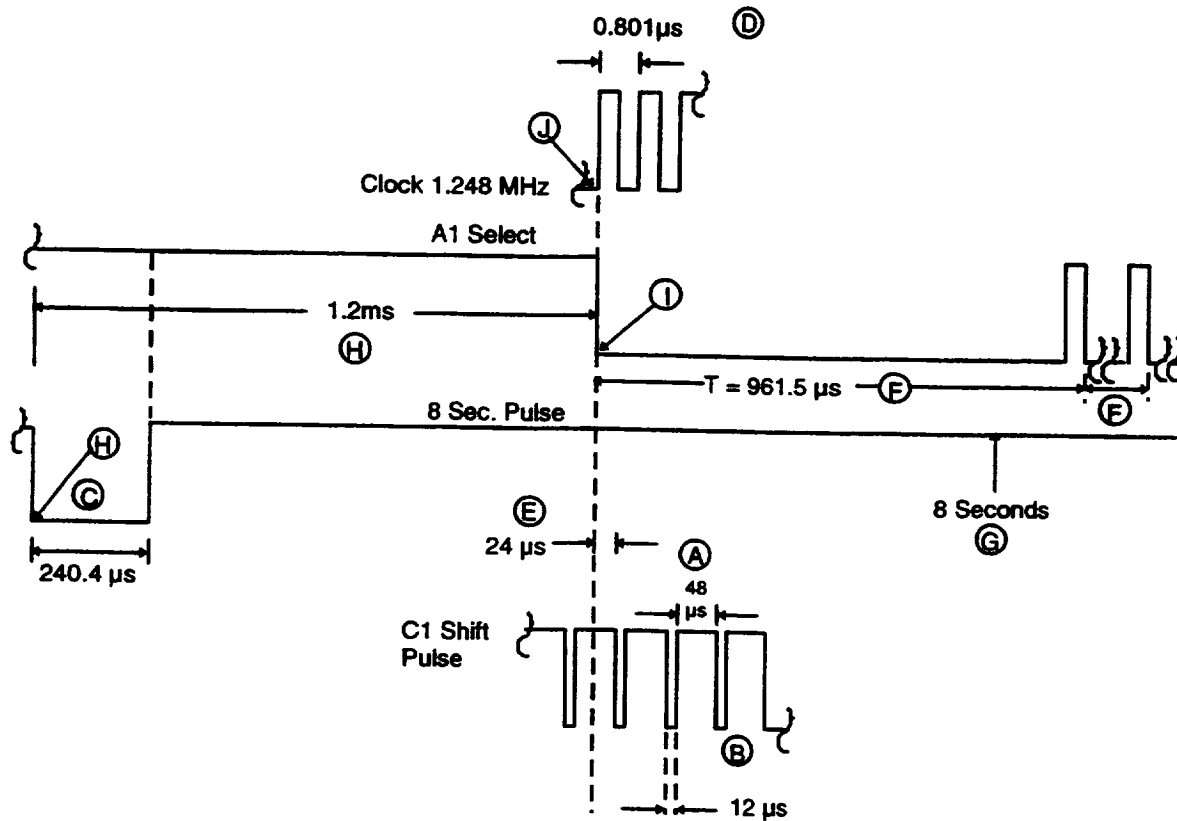


Figure 19. Clock Pulses Timing and Synchronization

3.2.4.3.2.1 1.248 MHz synchronization clock. Perform the following procedures:

- Configure the unit and the test equipment as indicated in Figure 20.
- Connect CHANNEL-1 of the oscilloscope to the 1.248 MHz clock signal as shown in Figure 20.
- Turn the unit ON as described in 3.2.3.5.

NOTE

Do not proceed without successful completion of step 3.

- Using the oscilloscope, measure the 1.248 MHz clock signal. Record the data and attach the photograph or plot on TDS 8.

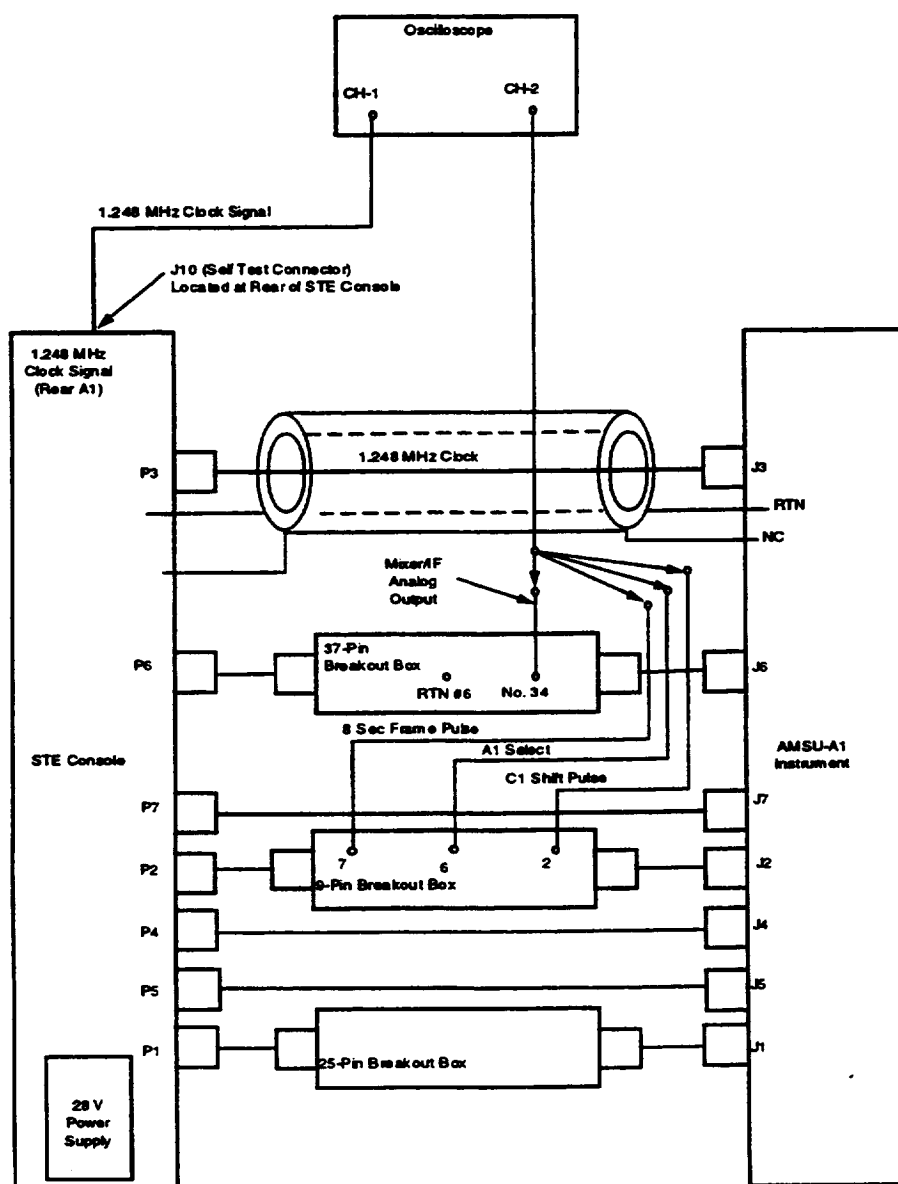


Figure 20. Clock Signals Test Setup

3.2.4.3.2.2 C1 shift pulse verification. Connect CHANNEL-2 of the oscilloscope to Pin 2 of the 9-pin breakout box (P2-J2). Photograph or plot the oscilloscope display and record the information indicated on TDS 9.

3.2.4.3.2.3 A1 select pulse verification. Connect CHANNEL-2 of the oscilloscope to Pin 6 of the 9-pin breakout box (P2-J2). Photograph or plot the oscilloscope display and record the information indicated on TDS 10.

3.2.4.3.2.4 8-seconds frame sync pulse verification

1. Connect CHANNEL-2 of the oscilloscope to Pin 7 of the 9-pin breakout box (P2-J2). Photograph or plot the oscilloscope display and record the information indicated on TDS 11. (Record of "C" timing only, is required.)
2. Turn the unit OFF by executing the softkey command [11] MODULE TOTALLY OFF to OFF. Leave both breakout boxes in place.

3.2.4.3.2.5 Synchronization signal relationship. The following synchronization signal relationship shall be verified.

- a. A1 select pulse and the 8-second frame sync pulse
 1. With the unit off, configure the unit and the test equipment as indicated in Figure 21.
 2. Connect CHANNEL-1 of the oscilloscope to the breakout box, Pin 6 (A1).
 3. Adjust the amplitude and the trigger level of the oscilloscope for best picture.
 4. Photograph or plot the oscilloscope display and attach the photograph or plot in the space provided on TDS 12.
 5. From the photograph or plot, verify the synchronization as described in TDS 12. Record pass or fail.
- b. A1 select pulse and C1 shift pulse
 1. Connect CHANNEL-2 of the oscilloscope to the breakout box Pin 2 (C1 shift pulse).
 2. Adjust the amplitude and the trigger level of the oscilloscope for best picture.
 3. Photograph or plot the oscilloscope display and attach the photograph or plot in the space provided on TDS 12, sheet 2.
 4. From the photograph or plot, verify the synchronization as described in TDS 12, sheet 2. Record pass or fail.
- c. A1 select pulse and 1.248 MHz clock.
 1. Connect CHANNEL-2 of the oscilloscope to the clock connector located at the rear of the STE.
 2. Adjust the amplitude and the trigger level of the oscilloscope for best picture.
 3. Photograph or plot the oscilloscope display and attach the photograph or plot in the space provided on TDS 13.
 4. From the photograph or plot, verify the synchronization as described in TDS 13. Record pass or fail.

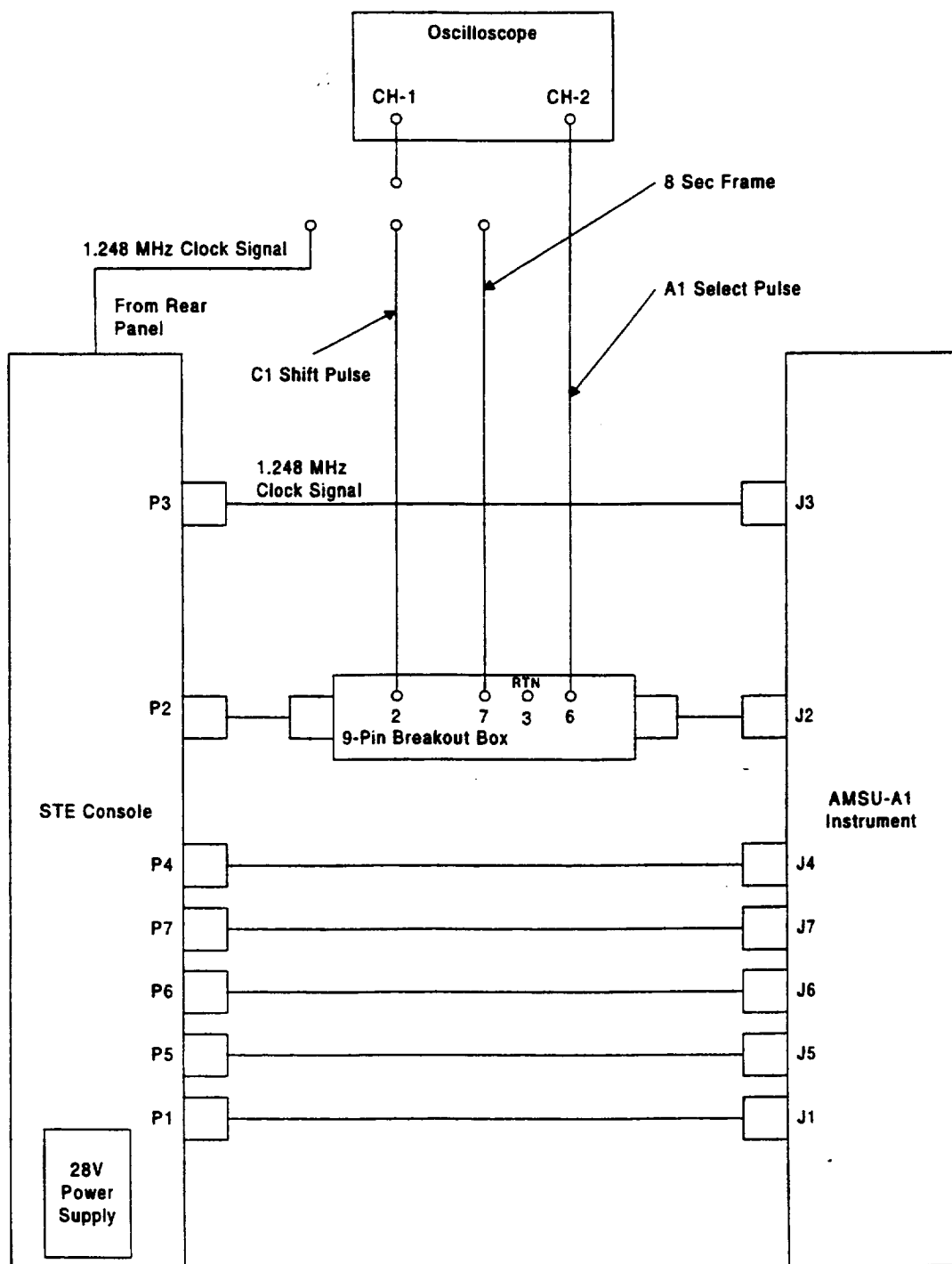


Figure 21. Synchronization Signal Relationships Test Setup

3.2.4.3.3 Commands and digital-B telemetry test. Commands and digital-B telemetry shall be verified in accordance with the following paragraphs.

3.2.4.3.3.1 Module totally off. Commands and digital-B telemetry, with the module totally off, shall be tested as follows:

1. Turn the unit on as follows:
 - a. Press [12] POWER ON (from 1st screen).
 - b. Press [2] MONITOR ONLY (from 1st screen)
 - c. Press [14] COMMANDS (from 2nd screen)

Verify the screen displays the default parameters below.

COMMANDS			
[9] MODULE POWER =	CONNECT	ANTENNA IN COLD CAL POS =	NO [15]
[10] SURVIVAL HTR PWR =	OFF	ANTENNA IN NADIR POS=	NO [16]
[11] MODULE TOTALLY OFF =	ON	ANTENNA FULL SCAN MODE =	NO [17]
[12] SCANNER A1-1 POWER =	ON	PLL POWER =	PLLOW1 [18]
[13] SCANNER A1-2 POWER =	ON	COLD CAL POSITION MSB =	ZERO [19]
[14] ANTENNA WARM CAL POS =	YES	COLD CAL POSITION LSB =	ZERO [20]
POWER [4] ON			

2. From the Commands Menu, execute command [11] MODULE TOTALLY OFF to OFF mode.
3. Wait at least 18 seconds, then verify that the following events are in effect:
 - a. [11] MODULE TOTALLY OFF = OFF
 - b. [12] SCANNER A1-1 POWER = OFF.
 - c. [13] SCANNER A1-2 POWER = OFF.
 - d. [10] SURVIVAL HEATER POWER = OFF

Antenna reflectors for A1-1 and A1-2 pointing toward the warm load.

4. Record the above observations on TDS 14.

3.2.4.3.3.2 Survival heater power ON/OFF command. The survival heater power ON/OFF command shall be tested as follows:

1. Execute command [10] SURVIVAL HEATER POWER to ON mode. Wait at least 18 seconds. Verify that the command is in effect. Record observation on TDS 14.
2. Execute command [10] SURVIVAL HEATER to OFF mode. Wait at least 18 seconds. Verify that the command is in effect. Record observation on TDS 14.

3.2.4.3.3.3 Module power connect command. The module power connect command shall be tested as follows:

1. Execute command [9] MODULE POWER to CONNECT mode. Wait at least 18 seconds. Verify that the command is in effect. Record observation on TDS 14.
2. Verify that the current at the STE power supply is 0.5 to 4.3 Amperes. Record this information on TDS 14.

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3.2.4.3.3.4 Phase lock loop (PLL) PLLO No. 1 / PLLO No. 2. The PLL PLLO No. 1/PLLO No. 2 command shall be tested as follows:

1. Execute [18] PLL POWER = PLLO#2
Wait at least 18 seconds. Verify that the command is in effect. Record observation on TDS 14.
2. Execute [18] PLL POWER = PLLO#1
Wait at least 18 seconds. Verify that the command is in effect. Record observation on TDS 14.

3.2.4.3.3.5 Scanner commands verification. The scanner commands shall be tested as follows:

1. Execute commands as necessary to obtain the following configuration:

COMMANDS			
[9] MODULE POWER =	CONNECT	ANTENNA IN COLD CAL POS =	NO [15]
[10] SURVIVAL HTR PWR =	OFF	ANTENNA IN NADIR POS=	NO [16]
[11] MODULE TOTALLY OFF =	ON	ANTENNA FULL SCAN MODE =	YES [17]
[12] SCANNER A1-1 POWER =	ON	PLL POWER =	PLLO#1 [18]
[13] SCANNER A1-2 POWER =	ON	COLD CAL POSITION MSB =	ZERO [19]
[14] ANTENNA WARM CAL POS =	NO	COLD CAL POSITION LSB =	ZERO [20]
POWER [4] ON			

Wait at least 18 seconds. Verify that the commands are in effect. Record observations on TDS 15.

2. Execute. [12] SCANNER A1-1 POWER = OFF
[13] SCANNER A1-2 POWER = OFF

Wait at least 18 seconds. Verify that the commands are in effect. Record observations on TDS 16.

3. Execute. [12] SCANNER A1-1 POWER = ON
[13] SCANNER A1-2 POWER = ON

Wait at least 18 seconds. Verify that the commands are in effect. Record observations on TDS 17.

3.2.4.3.3.6 Scanner position commands (A1-1 and A1-2) verification. Verify scanner position command operation as follows:

NOTE

Verification of the scan position is applicable to both antenna reflectors located at the high and low bays of the instrument (A1-1 and A1-2).

1. Execute: [14] ANTENNA WARM CAL POS = YES
[17] ANTENNA FULL SCAN MODE = NO

Wait at least 18 seconds. Verify that the commands are in effect. Record observation on TDS 18.

2. Execute: [15] ANTENNA IN COLD CAL POS = YES
[14] ANTENNA WARM CAL POS = NO

Execute: [19] COLD CAL POS MSB = zero
[20] COLD CAL POS LSB = one

Wait at least 18 seconds. Verify that the commands are in effect. Record observation on TDS 18.

3. Execute: [19] COLD CAL POSITION MSB = ONE
 [20] COLD CAL POSITION LSB = ZERO

Wait at least 18 seconds. Verify that the commands are in effect. Record observation on TDS 18.

4. Execute: [19] COLD CAL POSITION MSB= ONE
 [20] COLD CAL POSITION LSB= ONE

Wait at least 18 seconds. Verify that the commands are in effect. Record observation on TDS 18.

5. Execute: [19] COLD CAL POSITION MSB= ZERO
 [20] COLD CAL POSITION LSB= ZERO

Wait at least 18 seconds. Verify that the commands are in effect. Record observation on TDS 18.

6. Execute: [16] ANTENNA IN NADIR POSITION = YES
 [15] ANTENNA IN COLD CAL POS = NO

Wait at least 18 seconds. Verify that the commands are in effect. Record observation on TDS 18.

7. Execute: [14] ANTENNA WARM CAL POS = YES

Wait at least 18 seconds. Verify that the commands are in effect. Record observation on TDS 18.

3.2.4.3.4 Digital-A data output verification. The following items shall be tested to verify the digital-A data output:

- a. Full scan (3.2.4.3.4.1)
- b. Warm load (3.2.4.3.4.2)
- c. Cold cal (3.2.4.3.4.3)
- d. Nadir (3.2.4.3.4.4).

For each of the above scan modes, the following parameters will be subject to pass/fail criterion:

- [I] Sync. sequence
- [II] Unit I.D. and serial number
- [III] Digital-B serial data verification
- [IV] Reflector positions

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[V] Radiometric data (scene data)

Radiometric data shall be obtained from two channels only, Channels 9 and 3. Channel 9 is physically located at the high bay of the sensor (A1-1 location) and Channel 3 is located at the lower bay of the sensor (A1-2 location).

[VI] Temperature sensors.

For the cold cal mode, reflector position [IV], verify the following:

- (a) Cold cal position with MSB=1 and LSB=0
- (b) Cold cal position with MSB=0 and LSB=1
- (c) Cold cal position with MSB=1 and LSB=1.

NOTE

The calibration data for the selected AMSU-A1 sensor serial number is required prior to the start of this test. Refer to 3.2.4.3.4.1.

3.2.4.3.4.1 Full scan mode. The digital-A data output in full-scan mode shall be tested as follows:

1. Turn the unit on. Execute commands as necessary to obtain the following configuration:

COMMANDS			
[9] MODULE POWER =	CONNECT	ANTENNA IN COLD CAL POS =	NO [15]
[10] SURVIVAL HTR PWR =	OFF	ANTENNA IN NADIR POS=	NO [16]
[11] MODULE TOTALLY OFF =	ON	ANTENNA FULL SCAN MODE =	YES [17]
[12] SCANNER A1-1 POWER =	ON	PLL POWER =	PLLO#1 [18]
[13] SCANNER A1-2 POWER =	ON	COLD CAL POSITION MSB =	ZERO [19]
[14] ANTENNA WARM CAL POS =	NO	COLD CAL POSITION LSB =	ZERO [20]
POWER [4] ON			

2. Obtain a full printout (9 pages) of all the parameters ([I] through [VI]) described above, by touching the PRINT [3] FULL touch area. The computer will start printing all 9 pages of data.
3. Label 1st page of 9 pages with the unit serial number and the paragraph number corresponding to this test.

(I), (II), and (III) Sync, Unit ID, and Digital-B Data

4. Using Page 1 of the printout, verify that elements 0001 through 0008 are within the required values specified in TDS 19. Record pass or fail.

[IV] Reflector position**NOTE**

To verify the following steps, the operator may print out the individual parameters by using AE-26157 and attach the data to each TDS.

5. Using the individual printout, verify that there is no "E" ERROR Flag (for S/N 102 through 104) on the computer printout. Record pass or fail on TDS 20. For S/N 105 and up, verify that position values are within ± 10 counts from requirement provided in TDS 6, AE-26002/1.

[V] Radiometric data

6. Using the individual printout, verify that the data are within the values specified on TDS 21. Record pass or fail.

[VI] Temperature sensors

7. Using the individual printout, verify that elements 1090 through 1180 are within the values specified on TDS 22 (sheets 1 and 2). Record pass or fail.

3.2.4.3.4.2 Warm cal mode. The digital-A data output, in warm-cal mode shall be tested as follows:

1. Execute commands as necessary to obtain the following configuration:

COMMANDS			
[9] MODULE POWER =	CONNECT	ANTENNA IN COLD CAL POS =	NO [15]
[10] SURVIVAL HTR PWR =	OFF	ANTENNA IN NADIR POS=	NO [16]
[11] MODULE TOTALLY OFF =	ON	ANTENNA FULL SCAN MODE =	NO [17]
[12] SCANNER A1-1 POWER =	ON	PLL POWER =	PLLO#1 [18]
[13] SCANNER A1-2 POWER =	ON	COLD CAL POSITION MSB =	ZERO [19]
[14] ANTENNA WARM CAL POS =	YES	COLD CAL POSITION LSB =	ZERO [20]
POWER [4] ON			

[II], [III], and [III] Sync, Unit ID, and Digital-B Data

2. Using Page 1 of the printout, verify that elements 0001 through 0008 are within the required values specified in TDS 23. Record pass or fail.

NOTE

To verify the following steps, the operator may printout the individual parameters by using AE-26157 and attach the data to each TDS.

[IV] Reflector position

3. Using the individual printout, verify that there is no "E" ERROR Flag (for S/N 102 through 104) on the computer printout. Record pass or fail on TDS 24. For S/N 105 and up, verify that position values are within ± 10 counts from requirement provided in TDS 6, AE-26002/1.

[V] Radiometric data

4. Using the individual printout, verify that the data are within the values specified on TDS 25. Record pass or fail.

[VI] Temperature sensors

5. Using the individual printout, verify that elements 1090 through 1180 are within the values specified on TDS 26 (sheets 1 and 2). Record pass or fail.

3.2.4.3.4.3 *Cold cal mode.* The digital-A data output, in cold-cal mode, shall be tested as follows:

1. Execute commands as necessary to obtain the following configuration:

COMMANDS			
[9] MODULE POWER =	CONNECT	ANTENNA IN COLD CAL POS =	YES [15]
[10] SURVIVAL HTR PWR =	OFF	ANTENNA IN NADIR POS=	NO [16]
[11] MODULE TOTALLY OFF =	ON	ANTENNA FULL SCAN MODE =	NO [17]
[12] SCANNER A1-1 POWER =	ON	PLL POWER =	PLLO#1 [18]
[13] SCANNER A1-2 POWER =	ON	COLD CAL POSITION MSB =	ZERO [19]
[14] ANTENNA WARM CAL POS =	NO	COLD CAL POSITION LSB =	ZERO [20]
POWER [4] ON			

II. [II] and [III] Sync, Unit ID, and Digital "B" data

2. Using Page 1 of the printout, verify that elements 0001 through 0008 are within the required values specified in TDS 27. Record pass or fail.

NOTE

To verify the following steps, the operator may print out the individual parameters by using AE-26157 and attach the data to each TDS.

IV] Reflector position

3. Using the individual printout, verify that there is no "E" ERROR Flag (for S/N 102 through 104) on the computer printout for steps 4a, 4b, 4c, and 4d. For S/N 105 and up, verify that position values are within ± 10 counts from requirement provided in TDS 6, AE-26002/1.
4. To test the cold cal reflector position, perform the following substeps:
 - a. Using AE-26157; select reflector position screen, execute PRINT [2] SCREEN ONLY, and attach the data to TDS 28. Verify that there is no "E" ERROR Flag (for S/N 102 through 104) on the computer printout. Record pass or fail on TDS 28. For S/N 105 and up, verify that position values are within ± 10 counts from requirement provided in TDS 6, AE-26002/1.
 - b. Execute commands [19] COLD CAL POSITION MSB to 0 and [20] COLD CAL POSITION LSB to 1. Repeat substep a. then proceed to substep c.
 - c. Execute commands [19] COLD CAL POSITION MSB to 1 and [20] COLD CAL POSITION LSB to 0. Repeat substep a., then proceed to substep d.
 - d. Execute commands [19] COLD CAL POSITION MSB to 1 and [20] COLD CAL POSITION LSB to 1. Repeat substep a., then proceed to substep e.
 - e. Execute commands [19] COLD CAL POSITION MSB to 0 and [20] COLD CAL POSITION LSB to 0.

V] Radiometric data

5. Using the individual printout, verify that the data are within the values specified on TDS 29. Record pass or fail.

[VI] Temperature sensors

6. Using the individual printout, verify that elements 1090 through 1180 are within the values specified on TDS 30 (sheets 1 and 2). Record pass or fail.

3.2.4.3.4.4 Nadir cal mode. The digital-A data output, in nadir-cal mode, shall be tested as follows:

1. Execute commands as necessary to obtain the following configuration:

COMMANDS			
[9] MODULE POWER =	CONNECT	ANTENNA IN COLD CAL POS =	NO [15]
[10] SURVIVAL HTR PWR =	OFF	ANTENNA IN NADIR POS=	YES [16]
[11] MODULE TOTALLY OFF =	ON	ANTENNA FULL SCAN MODE =	NO [17]
[12] SCANNER A1-1 POWER =	ON	PLL POWER =	PLLO#1 [18]
[13] SCANNER A1-2 POWER =	ON	COLD CAL POSITION MSB =	ZERO [19]
[14] ANTENNA WARM CAL POS =	NO	COLD CAL POSITION LSB =	ZERO [20]
POWER [4] ON			

[II], [III] and [III] Sync, Unit ID, and Digital "B" data

2. Using the individual printout, verify that elements 0001 through 0008 are within the required values specified in TDS 31. Record pass or fail.

NOTE

To verify the following steps, the operator may printout the individual parameters by using AE-26157 and attach the data to each TDS.

[IV] Reflector position

3. Using the individual printout, verify that there is no "E" ERROR Flag (for S/N 102 through 104) on the computer printout. Record pass or fail on TDS 24. For S/N 105 and up, verify that position values are within ± 10 counts from requirement provided in TDS 6, AE-26002/1

[V] Radiometric data

4. Using the individual printout, verify that the data are within the values specified on TDS 32. Record pass or fail.

[VI] Temperature sensors

5. Using the individual printout, verify that the elements 1090 through 1180 are within the values specified on TDS 33 (sheets 1 and 2). Record pass or fail.

3.2.4.3.5 Analog telemetry test. The purpose of this test is to verify that the 26 analog telemetry signals are within requirements. The purpose of the analog telemetry signals is to provide information about the functionality of the subsystems during normal operation of the unit. The analog telemetry signals shall be verified in two ways: (1) by measuring the analog telemetry signals directly at the interfacing connector and (2) by use of the STE.

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3.2.4.3.5.1 Analog TLM signals measurements connector J6. Measure analog TLM signals at connector J6 as follows:

1. Configure the unit and the STE as indicated in Figure 22. Verify that unit power is off prior to the installation of the breakout boxes. To turn the unit off, select the Commands Menu and execute command [9] MODULE POWER = DISCONNECT and POWER [4] OFF. Manually turn off the STE 28 V power supply located inside the STE console.
2. Turn the unit on as follows:
 - (a) Turn on the STE 28 V power supply.
 - (b) On the Commands Menu, execute: POWER [4] ON and [9] MODULE POWER = CONNECT. Verify the display is as follows.

COMMANDS			
[9] MODULE POWER =	CONNECT	ANTENNA IN COLD CAL POS =	NO [15]
[10] SURVIVAL HTR PWR =	OFF	ANTENNA IN NADIR POS=	NO [16]
[11] MODULE TOTALLY OFF =	ON	ANTENNA FULL SCAN MODE =	YES [17]
[12] SCANNER A1-1 POWER =	ON	PLL POWER =	PLLO#1 [18]
[13] SCANNER A1-2 POWER =	ON	COLD CAL POSITION MSB =	ZERO [19]
[14] ANTENNA WARM CAL POS =	NO	COLD CAL POSITION LSB =	ZERO [20]
POWER [4] ON			

3. Using the "28 V Analog Telemetry Bus Return" (J1-10) as a reference ground, measure and record the six temperature sensor voltages in the order specified on TDS 34.
4. Using the "Signal Ground" (J2-03) as a reference ground, measure and record the remaining analog telemetry voltage levels in the order specified on TDS 34.
5. Leave the unit on in preparation for the next test.

3.2.4.3.5.2 Analog TLM signal measurements using the STE. Analog TLM signal measurements using the STE shall be taken as follows:

1. Using the individual printout, verify that the data matches the values specified on TDS 35. Record pass or fail.
2. Attach computer individual printout to TDS 35.

3.2.4.3.6 Test point verification. The purpose of this test is to verify the performance of the integrator and its associated clock pulses. Figure 2 shows the integration waveform and the clock signals. Test point verification consists of the following parameters:

- a. Integration/Hold and Dump Clock Signals. (3.2.4.3.6.1) (Time and amplitude)
- b. Integration Time (Analog Output). (3.2.4.3.6.2) (Time and amplitude for all 13 channels.)

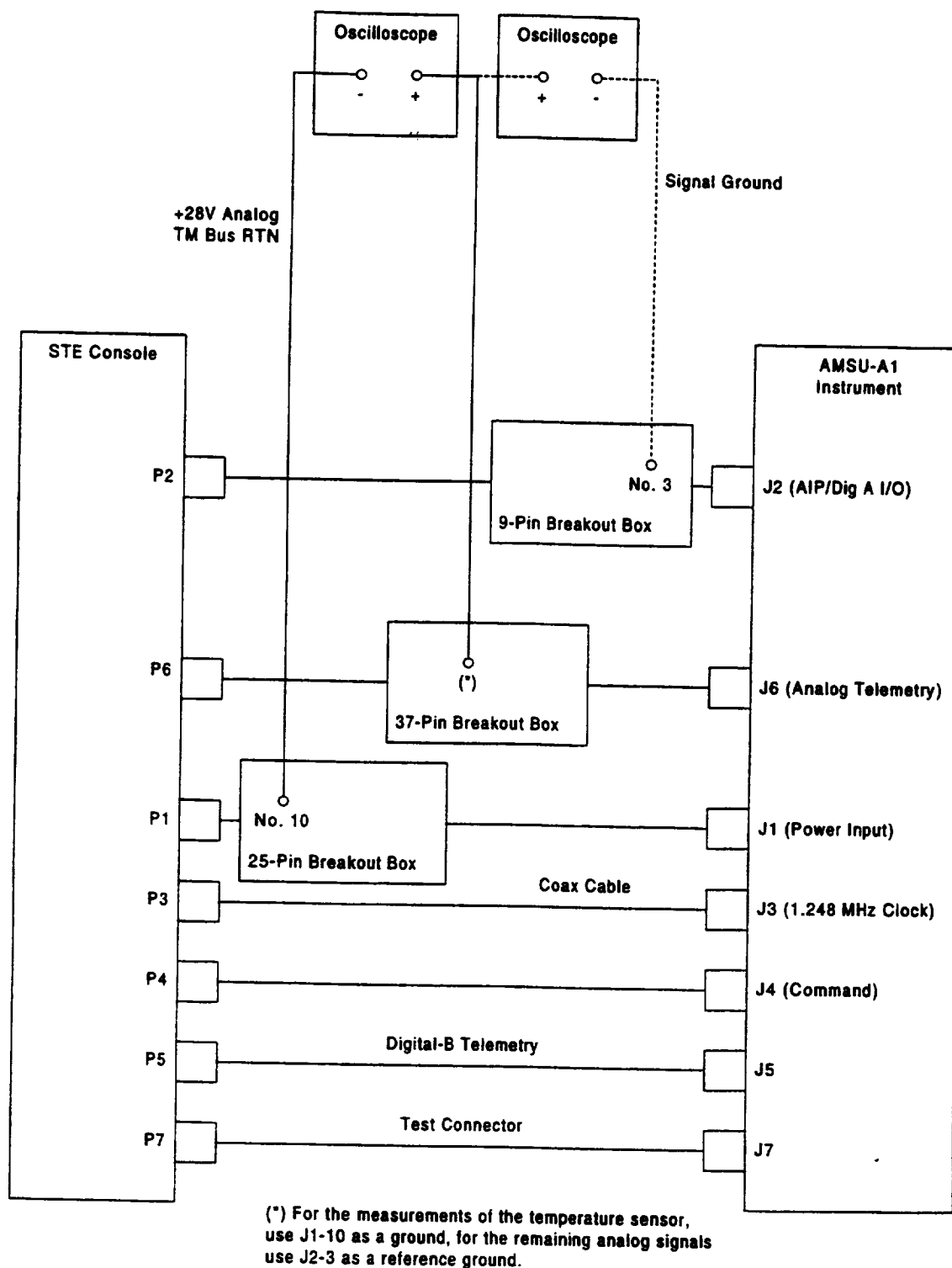


Figure 22. Analog Telemetry Signal Verification Test Setup

3.2.4.3.6.1 *Integration/hold and dump clock signals.* The integration/hold and dump clock signals shall be tested as follows:

1. Referring to Figure 23, configure the oscilloscope as follows:
 - (a) Channel-2 to J7-06 dump clock signal.
 - (b) Channel-1 to J7-24 integration/hold clock signal.
 - (c) Channel-1 (shielded cable) to J7-05 (I/H and Dump RTN).
 - (d) Internal trigger mode to channel-1.
 - (e) Amplitude and Time optimized for best resolution.
2. Photograph or plot the oscilloscope display and attach the photograph or plot to TDS 36.
3. From the photograph or plot, measure time and amplitude for the integrate/hold and dump clock signals. Verify that the data obtained are within the requirements specified on TDS 36 and Figure 2.
4. Leave the equipment in place and the unit turned on in preparation for the next test.

3.2.4.3.6.2 *Integration time (analog outputs).* The analog outputs integration time shall be tested as follows:

1. Reconfigure the test equipment as indicated in Figure 24.
2. Connect the oscilloscope, channel-2 positive line to J7-XX of the 37-pin breakout box. Where: XX indicates the pinout distribution for all the 13 channels as shown in Table III.
3. Start with the first channel of the above list. Adjust the oscilloscope for best amplitude and time resolution. The displayed signals should look like Figure 2.
4. Photograph or plot the display and attach it to the corresponding TDS (TDSs 37 through 43).
5. From the photograph or plot, measure the integration time and the amplitude. Verify that the data obtained is within the requirements specified in TDSs 37 through 43.
6. Repeat steps 2 through 5 to measure the integration time (analog output) for the remaining channels.
7. Leave the unit turned on and the test equipment in place in preparation for the next test.

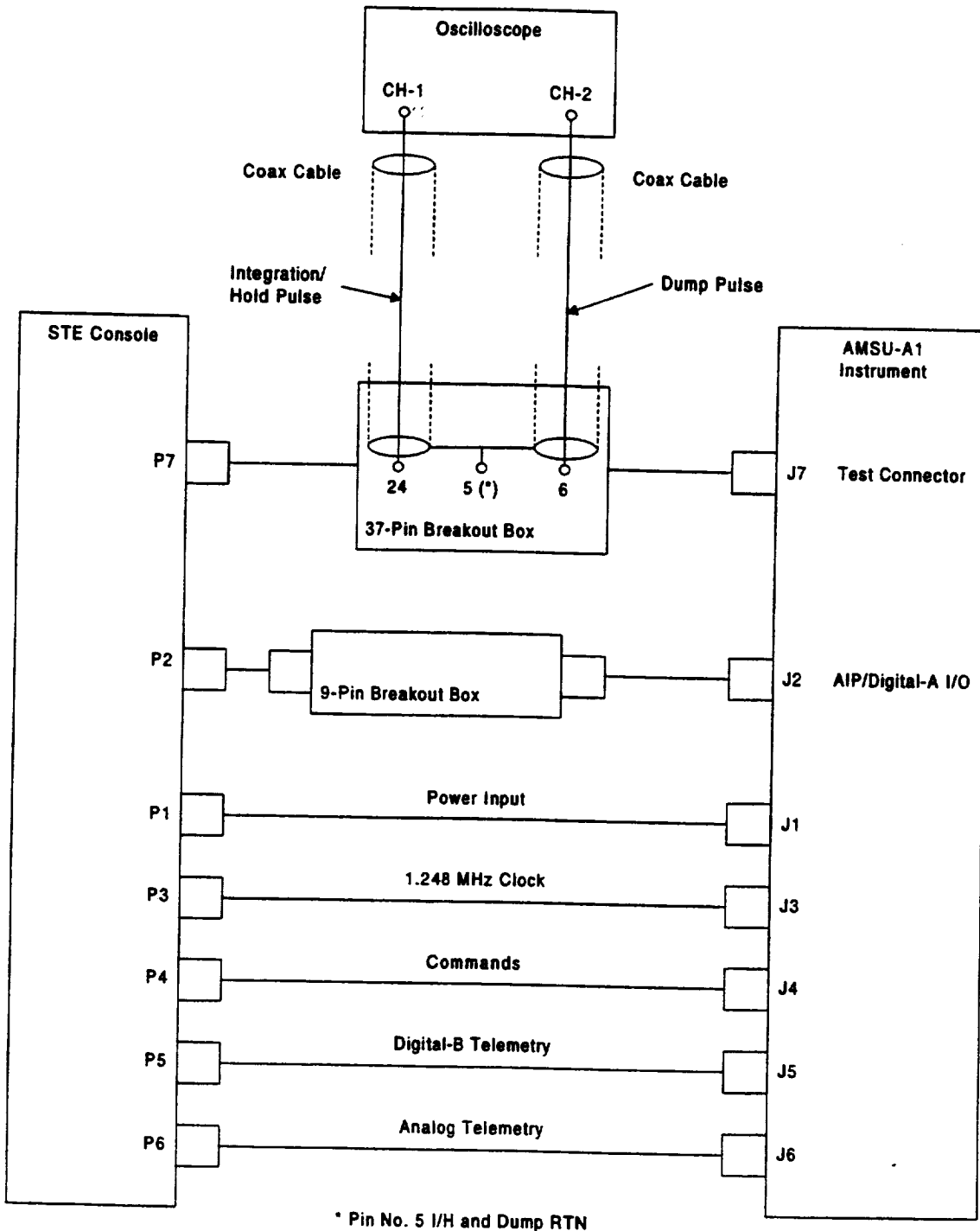


Figure 23. Integration/Hold and Dump Signals Verification Test Setup

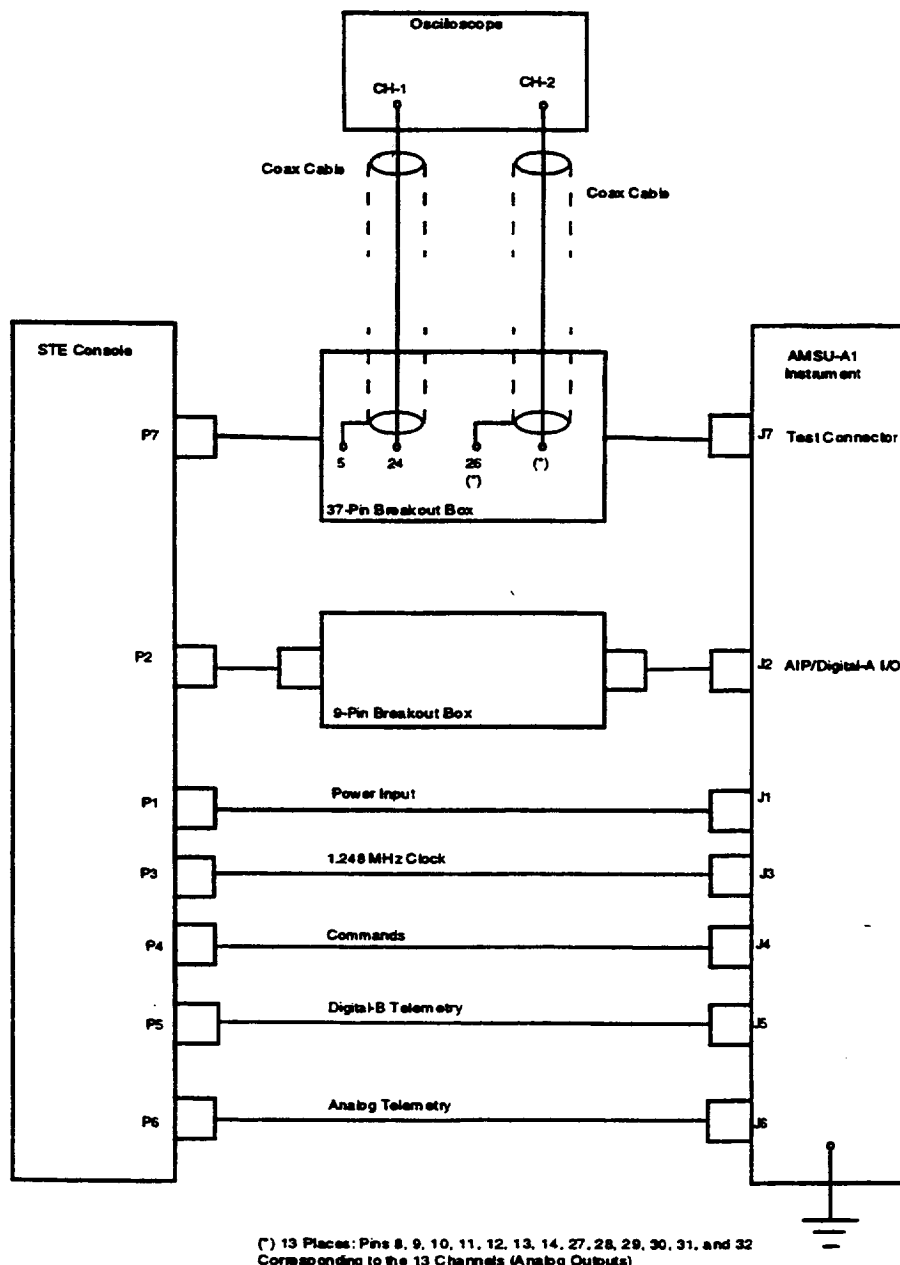
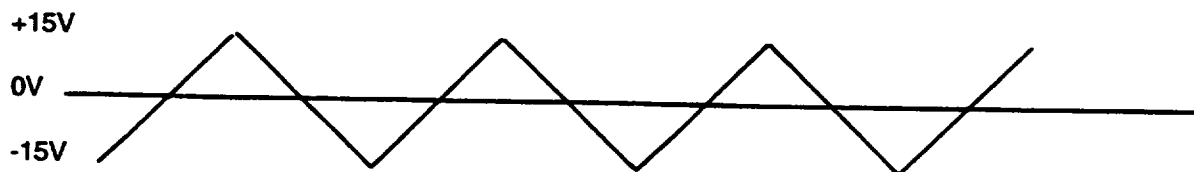


Figure 24. Integration Time (Analog Output) Verification Setup

3.2.4.3.6.3 PLLO No. 1 verification. The PLLO No. 1 shall be verified as follows:

1. Reconfigure the oscilloscope as indicated in Figure 25. Connect the oscilloscope channel-1 to J7-22 (PLLO No. 1).
2. From the Commands Menu of the STE, verify that the PLLO is selected in PLLO No. 1 as follows:
PLL POWER = PLLO#1 [18]
3. For S/N 101 - S/N 104, adjust the oscilloscope for best amplitude and time base. If the PLLO is locked properly, the oscilloscope will display a dc-voltage level of -15 to +15 V. Record the voltage level on TDS 44. Record PASS. (Any dc level recorded is considered PASS). If the PLLO is not locked properly, the scope will display a waveform similar to this:



Record FAIL on TDS 44. Discontinue the test until the deficiency is corrected.

4. For S/N 105 and above, if the PLLO is locked properly, the oscilloscope will display a dc-voltage = 4.0 ± 1 V. If the PLLO is not locked, the oscilloscope will display a dc-voltage of $+0.61 \pm 0.30$ V. If PLO is OFF, the oscilloscope will display a dc-voltage of 0.0 ± 0.2 V. If the PLLO is trying to acquire lock, the oscilloscope will display a various dc level. Record the voltage level on TDS 44.

Table III. Location and Frequency of Channel 3 through 15 Analog Outputs

Breakout Box Pin Location	Channel Distribution	Frequency
J7-08	Channel-03 Analog Output	50.3 GHz
J7-09	Channel-04 Analog Output	52.80 GHz
J7-10	Channel-05 Analog Output	53.596 GHz
J7-11	Channel-06 Analog Output	54.400 GHz
J7-12	Channel-07 Analog Output	54.940 GHz
J7-13	Channel-08 Analog Output	55.500 GHz
J7-14	Channel-09 Analog Output	57.290 GHz PLLO
J7-27	Channel-10 Analog Output	57.290 GHz PLLO
J7-28	Channel-11 Analog Output	57.290 GHz PLLO
J7-29	Channel-12 Analog Output	57.290 GHz PLLO
J7-30	Channel-13 Analog Output	57.290 GHz PLLO
J7-31	Channel-14 Analog Output	57.290 GHz PLLO
J7-32	Channel-15 Analog Output	89.000 GHz

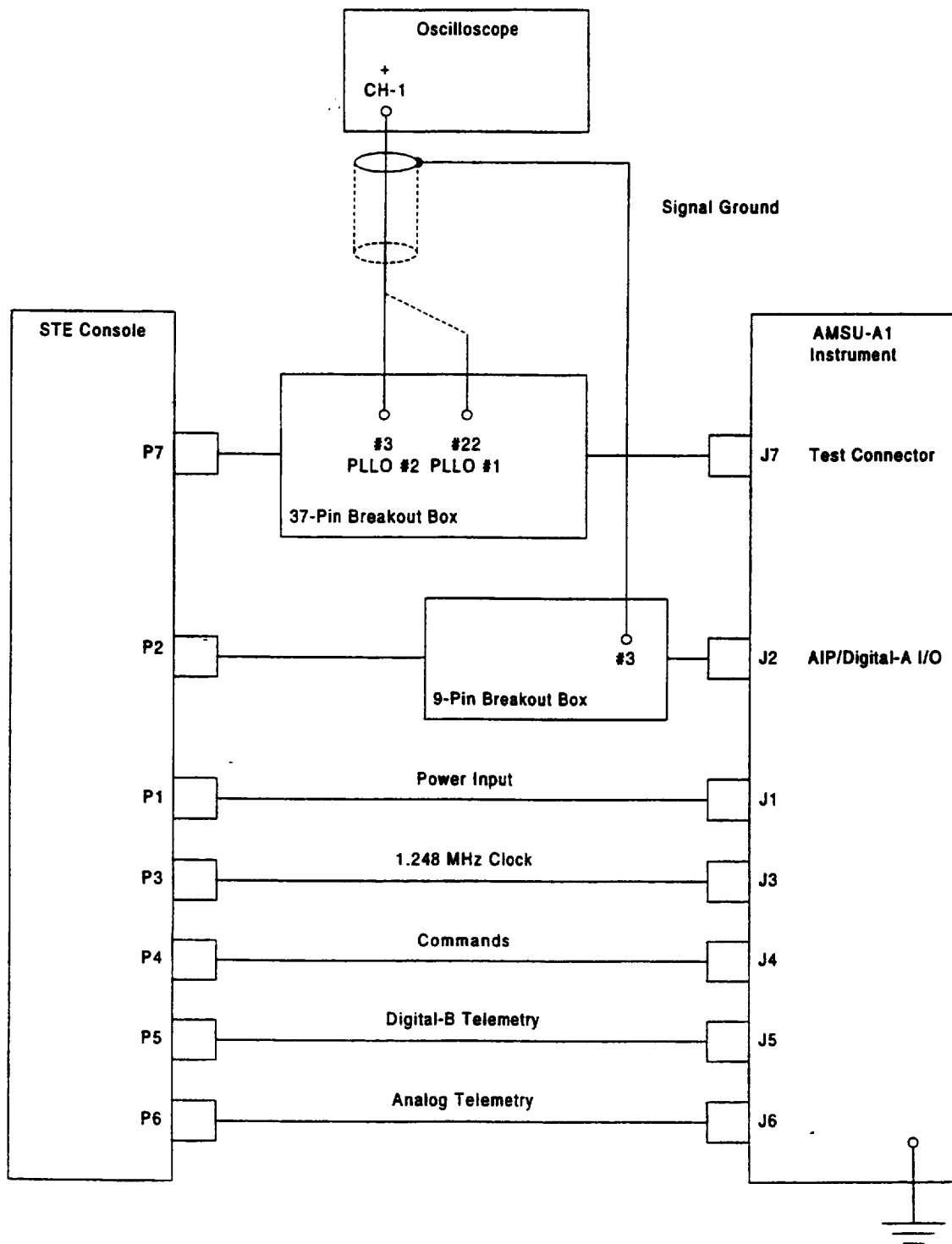
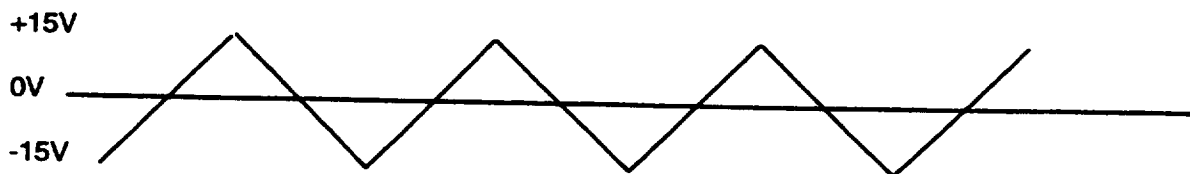


Figure 25. PLLO No. 1/No. 2 Test Setup

3.2.4.3.6.4 PLLO No. 2 verification. The PLLO No. 2 shall be verified as follows:

1. Reconfigure the oscilloscope as indicated in Figure 25. Connect the oscilloscope channel-1 to J7-03 (PLLO No. 2).
2. Select the PLLO No. 2 unit by executing the following command:
[18] PLL POWER = PLLO#2
3. For S/N 101 - S/N 104, adjust the oscilloscope for best amplitude and time base. If the PLLO is locked properly, the oscilloscope will display a dc-voltage level of -15 to +15 V. Record the voltage level on TDS 44. Record pass. (Any dc level recorded is considered PASS). If the PLLO is not locked properly, the scope will display a waveform similar to this:



Record FAIL on TDS 44. Discontinue the test until the deficiency is corrected.

4. For S/N 105 and above, if the PLLO is locked properly, the oscilloscope will display a dc-voltage = 4.0 ± 1 V. If the PLLO is not locked, the oscilloscope will display a dc-voltage of $+0.61 \pm 0.30$ V. If PLO is OFF, the oscilloscope will display a dc-voltage of 0.0 ± 0.2 V. If the PLLO is trying to acquire lock, the oscilloscope will display a various dc level. Record the voltage level on TDS 44.
5. Return to PLLO No. 1 by executing: PLL POWER = PLLO#1 [18]
6. Leave the unit turned on in preparation for the next test.

3.2.4.3.7 GSE mode verification. The purpose of this test is to verify the data obtained from the Ground Support Equipment (GSE), the following modes shall be evaluated. These modes are used for engineering evaluation only.

- GSE-1 (Position: 10, 10, 10)
- GSE-2 (Position: 1)
- GSE-3 (Position: current)
- GSE-4 (Position: 30)
- GSE-5 (Position: 6)
- GSE-7 (Position: required)

For GSE mode-1, the following parameters are subject to pass or fail criterion:

- [I] Sync. sequence
- [II] Unit ID and serial number

[III] Digital-B serial data verification

[IV] Reflector positions

[V] Radiometric data (Scene data). (Radiometric data will be limited to two channels only, channels 9 and 3. Channel 9 is physically located at the high bay of the sensor (A1-1 location) and channel 3 is located at the lower bay of the sensor (A1-2 location).

[VI] Temperature sensors.

For GSE 2 through 7, only the following parameters are subject to pass or fail criterion:

[IV] Reflector position.

[V] Radiometric data.

NOTE

Verification of GSE modes 2 through 7 are not required for the protoflight and flight instrument sensors since the modes are not used.

3.2.4.3.7.1 Equipment preparation and instrument turn-on procedure. To place instrument in GSE mode, proceed as follows:

1. Configure the test equipment as indicated in Figure 26.
2. Turn the unit on. Execute commands as necessary to obtain the following configuration:

COMMANDS			
[9] MODULE POWER =	CONNECT	ANTENNA IN COLD CAL POS =	NO [15]
[10] SURVIVAL HTR PWR =	OFF	ANTENNA IN NADIR POS=	NO [16]
[11] MODULE TOTALLY OFF =	ON	ANTENNA FULL SCAN MODE =	NO [17]
[12] SCANNER A1-1 POWER =	ON	PLL POWER =	PLLO#1 [18]
[13] SCANNER A1-2 POWER =	ON	COLD CAL POSITION MSB =	ZERO [19]
[14] ANTENNA WARM CAL POS =	NO	COLD CAL POSITION LSB =	ZERO [20]
POWER [4] ON		RETURN	[1]

Wait at least 18 seconds until the sending commands are acknowledged by the STE. At this point, the unit should be in the NO MODE with the STE collecting data.

3. Obtain a printout (9 pages) for all of the parameters ([I] through [VI]) described in 3.2.4.3.7 as follows:
 - (a) On Commands Menu, press: RETURN [1].
 - (b) On Main Menu, select: [10] SELF TEST.
 - (c) On Self Test Menu, select: [7] RUN GSE MODE.
(The computer will prompt: Enter GSE mode {0 to 15}.)
 - (d) Select corresponding GSE mode under test.
 - (e) Press PRINT [3] FULL. The computer will start printing all 9 pages.

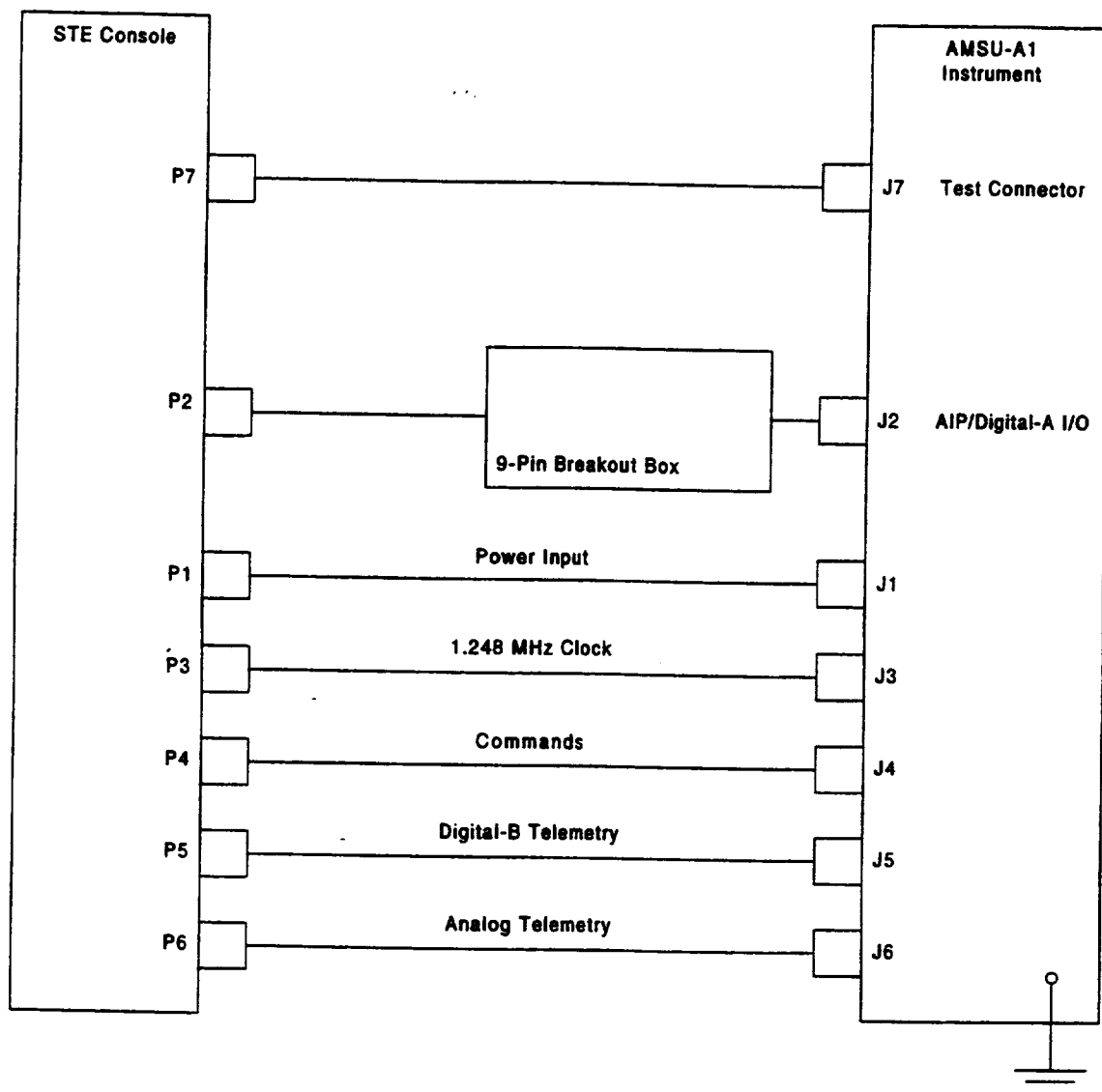


Figure 26. GSE Modes Verification Test

3.2.4.3.7.2 GSE Mode-1. The GSE mode-1 shall be tested as follows:

[I], [III], and [III] Sync, Unit ID, and Digital-B

1. Using the printout, verify that elements 1 through 8 are within the values specified on TDS 45. Record pass or fail.

NOTE

To verify the following steps, the operator may printout the individual parameters by using AE-26157 and attach the data to each TDS.

[IV] Reflector Positions

2. Using the individual printout, verify that the reflector positions are within the values specified in AE-26002/1, TDS 5 and 6. Record pass or fail on TDS 46.

[V] Radiometric Data

3. Using the individual printout, verify that the radiometric data are within the values specified on TDS 47.

[VI] Temperature Sensors

4. Using the individual printout, verify that elements 1090 through 1180 are within the values specified on TDS 48 (sheets 1 and 2). Record pass or fail.

3.2.4.3.7.3 GSE Mode-2. The GSE Mode-2 shall be tested as follows:

1. Obtain a printout (9 pages) for all of the parameters ([I] through [VI]) described in 3.2.4.3.7 as follows:
 - (a) Return to the Main Menu by pressing: RETURN [1].
 - (b) On Main Menu, select: [10] SELF TEST.
 - (c) On Self Test Menu, select: [7] RUN GSE MODE.
(The computer will prompt: Enter GSE mode {0 to 15}.)
 - (d) Select GSE mode 2 at the prompt.
 - (e) Press PRINT [3] FULL. The computer will start printing all 9 pages.

NOTE

To verify the following step, the operator may print out the individual parameters by using AE-26157 and attach the data to each TDS or the 9 full page printout may be used.

[IV] Reflector Positions

2. Using Pages 1 through 6 of the printout, verify that the reflector positions are within the values specified in AE-26002/1, TDS 5 and 6. Record pass or fail on TDS 46.

3.2.4.3.7.4 GSE Mode-3. The GSE Mode-3 shall be tested as follows:

1. Obtain a printout (9 pages) for all of the parameters ([I] through [VI]) described in 3.2.4.3.7 as follows:
 - (a) Return to the Main Menu by pressing: RETURN [1].
 - (b) On Main Menu, select: [10] SELF TEST.
 - (c) On Self Test Menu, select: [7] RUN GSE MODE.
(The computer will prompt: Enter GSE mode {0 to 15}.)
 - (d) Select GSE mode 3 at the prompt.

NOTE

To verify the following step, the operator may printout the individual parameters by using AE-26157 and attach the data to each TDS or the 9 full page printout may be used.

[IV] Reflector Positions

2. Verify that both A1-1 and A1-2 reflectors increment one step every eight seconds.

3.2.4.3.7.5 GSE Mode-4. The GSE Mode-4 shall be tested as follows:

1. Obtain a printout (9 pages) for all of the parameters ([I] through [VI]) described in 3.2.4.3.7 as follows:
 - (a) Return to the Main Menu by pressing: RETURN [1].
 - (b) On Main Menu, select: [10] SELF TEST.
 - (c) On Self Test Menu, select: [7] RUN GSE MODE.
(The computer will prompt: Enter GSE mode {0 to 15}.)
 - (d) Select GSE mode 4 at the prompt.
 - (e) Press PRINT [3] FULL. The computer will start printing all 9 pages.

NOTE

To verify the following step, the operator may printout the individual parameters by using AE-26157 and attach the data to each TDS or the 9 full page printout may be used.

[IV] Reflector Positions

2. Using pages 1 through 6 of the printout, verify that the reflector positions are within the values specified in AE-26002/1, TDS 5 and 6. Record pass or fail on TDS 46.

3.2.4.3.7.6 GSE Mode-5. The GSE Mode-5 shall be tested as follows:

1. Obtain a printout (9 pages) for all of the parameters ([I] through [VI]) described in 3.2.4.3.7 as follows:
 - (a) Return to the Main Menu by pressing: RETURN [1].

- (b) On Main Menu, select: [10] SELF TEST.
- (c) On Self Test Menu, select: [7] RUN GSE MODE.
(The computer will prompt: Enter GSE mode {0 to 15}.)
- (d) Select GSE mode 5 at the prompt.
- (e) Press PRINT [3] FULL. The computer will start printing all 9 pages.

NOTE

To verify the following step, the operator may printout the individual parameters by using AE-26157 and attach the data to each TDS or the 9 full page printout may be used.

[IV] Reflector Positions

- 2. Using pages 1 through 6 of the printout, verify that the reflector positions are within the values specified in AE-26002/1, TDS 5 and 6. Record pass or fail on TDS 46.

3.2.4.3.7.7 GSE Mode-7. The GSE Mode-7 shall be tested as follows:

- 1. Obtain a printout (9 pages) for all of the parameters ([I] through [VI]) described in 3.2.4.3.7 as follows:
 - (a) Return to the Main Menu by pressing: RETURN [1].
 - (b) On Main Menu, select: [10] SELF TEST.
 - (c) On Self Test Menu, select: [7] RUN GSE MODE.
(The computer will prompt: Enter GSE mode {0 to 15}.)
 - (d) Select GSE mode 7 at the prompt.
 - (e) Press PRINT [3] FULL. The computer will start printing all 9 pages.

NOTE

To verify the following steps, the operator may printout the individual parameters by using AE-26157 and attach the data to each TDS or he may use the 9 page full printout.

[IV] Reflector Positions

- 2. Using pages 1 through 6 of the printout, verify that the reflector positions are within the values specified in AE-26002/1, TDS 5 and 6. Record pass or fail on TDS 46.
- 3. Set the STE to GSE MODE-0, failure to do so will cause the STE to produce faulty data when in normal mode. To enter GSE-MODE-0 into the computer:
 - (a) Return to the Main Menu by pressing: RETURN [1].
 - (b) On Main Menu, select: [10] SELF TEST.
 - (c) On Self Test Menu, select: [7] RUN GSE MODE.
(The computer will prompt: Enter GSE mode {0 to 15}.)

- (d) Select GSE mode 0.

3.2.4.4 Radiometer functional test. The purpose of the radiometer functional test is to verify the performance of the AMSU-A1 radiometer at the system level. This test shall consist of the following subtests:

- a. PLLO frequency measurements 3.2.4.4.1
- b. Relative NEAT measurements 3.2.4.4.2

3.2.4.4.1 PLLO frequency measurements. Measure the PLLO frequencies as follows:

1. Prepare the unit and the test equipment as indicated in Figure 27. Frequency verification for the receiver shall be performed on the following frequency (see Figure 28 for sample plot):

(A1-1) Ch-9,10,11,12,13 and 14: 57.290344 GHz (PLLO No. 1 and PLLO No. 2)

2. Turn on the unit by using the procedure stated in 3.2.3.5. Allow not less than one hour for the equipment to warm-up and for the unit to stabilize.

On the Commands Menu, execute the following commands:

- (a) [14] ANTENNA WARM CAL POS = NO
 - (b) [15] ANTENNA COLD CAL POS = NO
 - (c) [16] ANTENNA NADIR POS = YES
 - (d) [17] ANTENNA FULL SCAN MODE = NO
3. Record the measured frequencies on TDS 49, and plotter data. Repeat step 2 for PLLO No. 2.
 4. Remove the test equipment but leave the unit on in preparation for the next test.

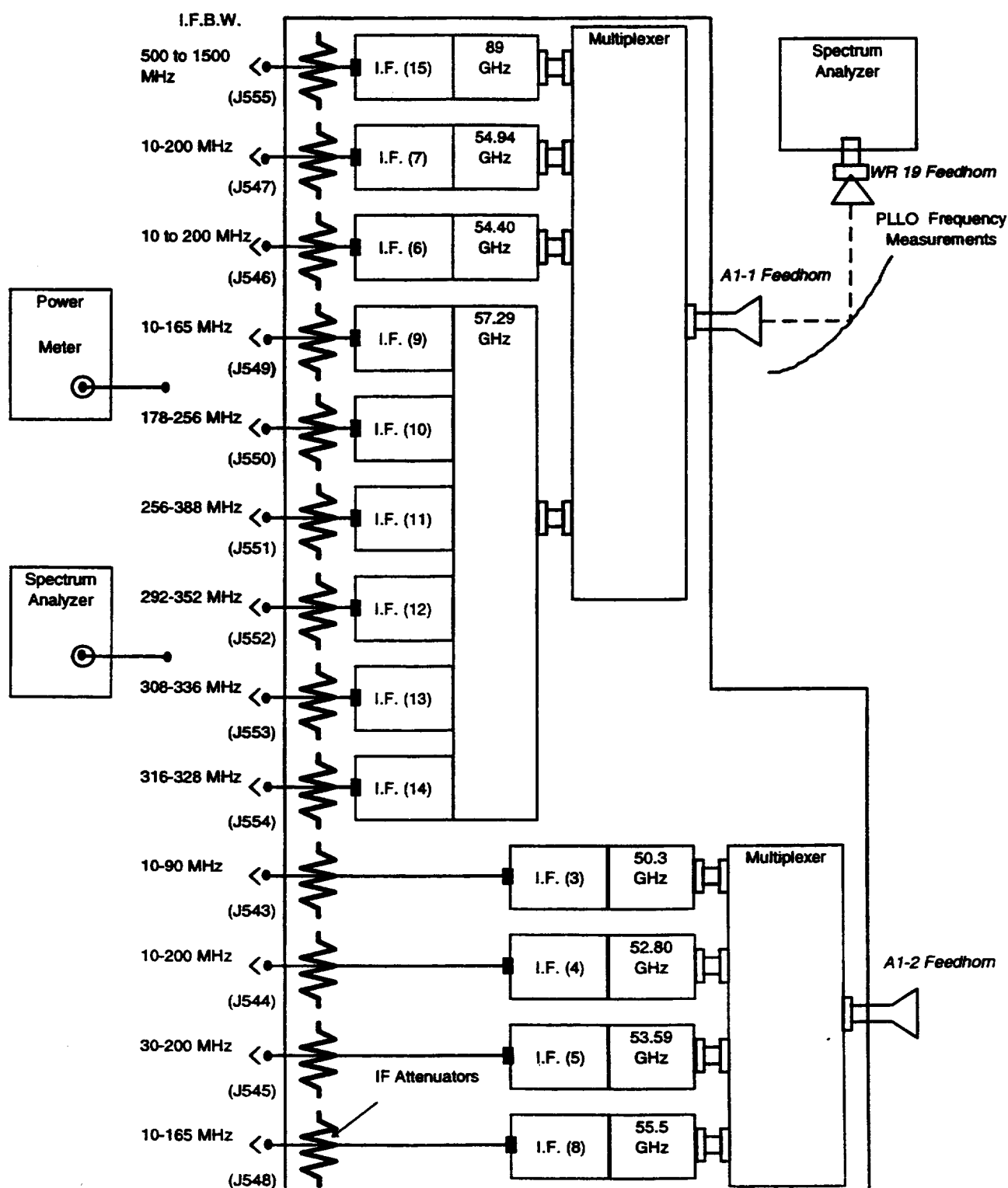


Figure 27. Configuration for RF Measurements

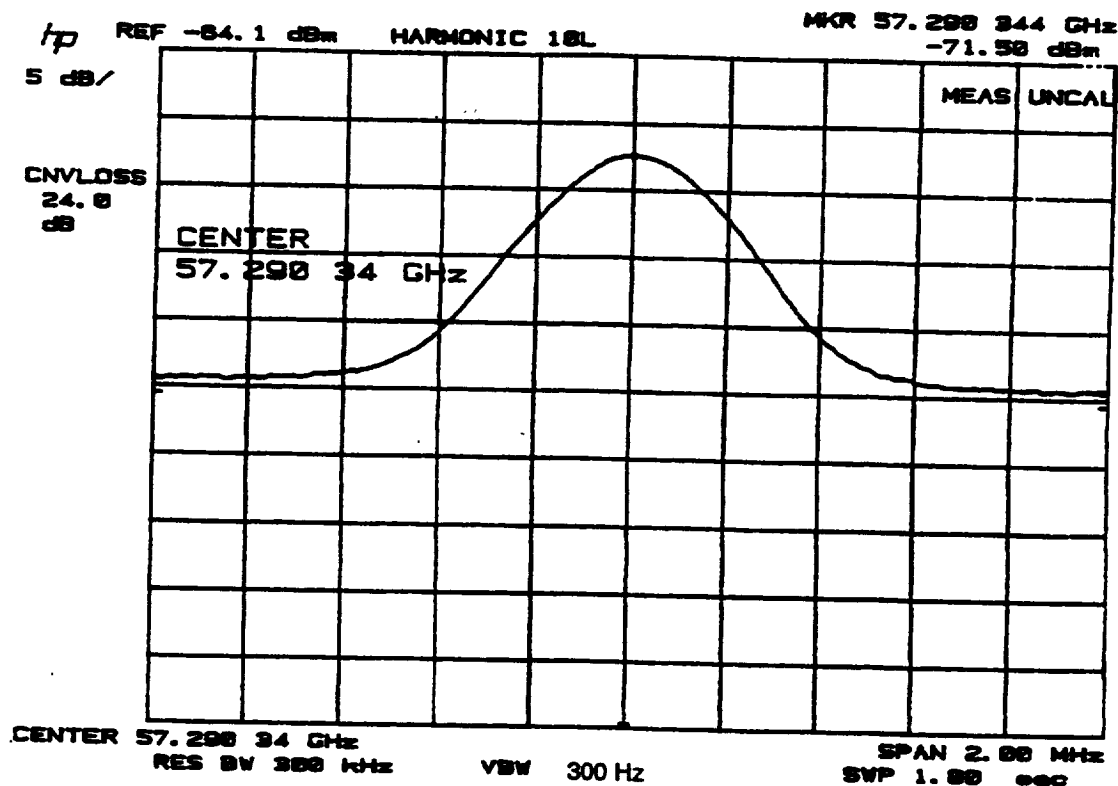


Figure 28. Sample Plot

3.2.4.4.2 Relative radiometer NEAT measurements. The purpose of this test is to perform a preliminary evaluation of the radiometer NEAT at a system level. Since the STE is not in the thermal-vacuum configuration, no temperature readings from the cold load are available. To compute the NEAT for this test, the temperature used for the cold load shall be LN₂ temperature.

The data obtained from this test are considered as relative NEAT and are to be used as a diagnostic tool to verify proper operation of the A/D converters and the spacecraft interface.

The equation to determine relative NEAT is as follows:

$$NEAT = \frac{[SD \times (Th - Tc)]}{M - N}$$

where:

- SD = Standard deviation of 120 samples at hot temperature (warm load)
- Th = Standard room temperature = 300 K
- Tc = Standard LN₂ temperature = 80 K
- M = Average of hot counts (120 samples)
- N = Average of cold counts (30 samples)

The sequence of testing shall be as follows:

- a. Equipment preparation and setup configuration
- b. Warm load radiometric data

- c. Cold load radiometric data
- d. Relative NEAT data collection

3.2.4.4.2.1 Equipment preparation and setup configuration. The equipment shall be set up as follows:

WARNING

The use of liquid nitrogen in a confined poorly ventilated area can cause asphyxiation and death due to a lack of oxygen (oxygen concentration below 20 percent). Accidental contact with liquid nitrogen will cause severe frostbite to the eyes or skin. When handling liquid nitrogen, personnel shall observe the following safety precautions:

- a. Ensure that the work area is well ventilated to prevent excessive gas buildup.
 - b. To protect your eyes always wear a face shield or safety goggles (safety glasses without side shields do not provide adequate protection).
 - c. To protect exposed skin, always wear an apron when pouring LN2 and whenever exposed to LN2, always wear a lab coat, gloves made for cryogenic work, cuffless trousers (worn outside the boots or shoes), and safety shoes.
 - d. Do not fill target fuller than 1.0 inch from the top. Fill target at the floor level, away from unit.
 - e. Do not move filled target without cover in place.
1. Configure the test equipment and the unit as indicated in Figure 29, except for the cold loads.
 2. Execute commands as necessary to obtain the following configuration:

COMMANDS			
[9] MODULE POWER =	CONNECT	ANTENNA IN COLD CAL POS =	NO [15]
[10] SURVIVAL HTR PWR =	OFF	ANTENNA IN NADIR POS=	NO [16]
[11] MODULE TOTALLY OFF =	ON	ANTENNA FULL SCAN MODE =	NO [17]
[12] SCANNER A1-1 POWER =	ON	PLL POWER =	PLLO#1 [18]
[13] SCANNER A1-2 POWER =	ON	COLD CAL POSITION MSB =	ZERO [19]
[14] ANTENNA WARM CAL POS =	YES	COLD CAL POSITION LSB =	ZERO [20]
POWER [4] ON			

3. Allow 30 minutes for the unit to stabilize.

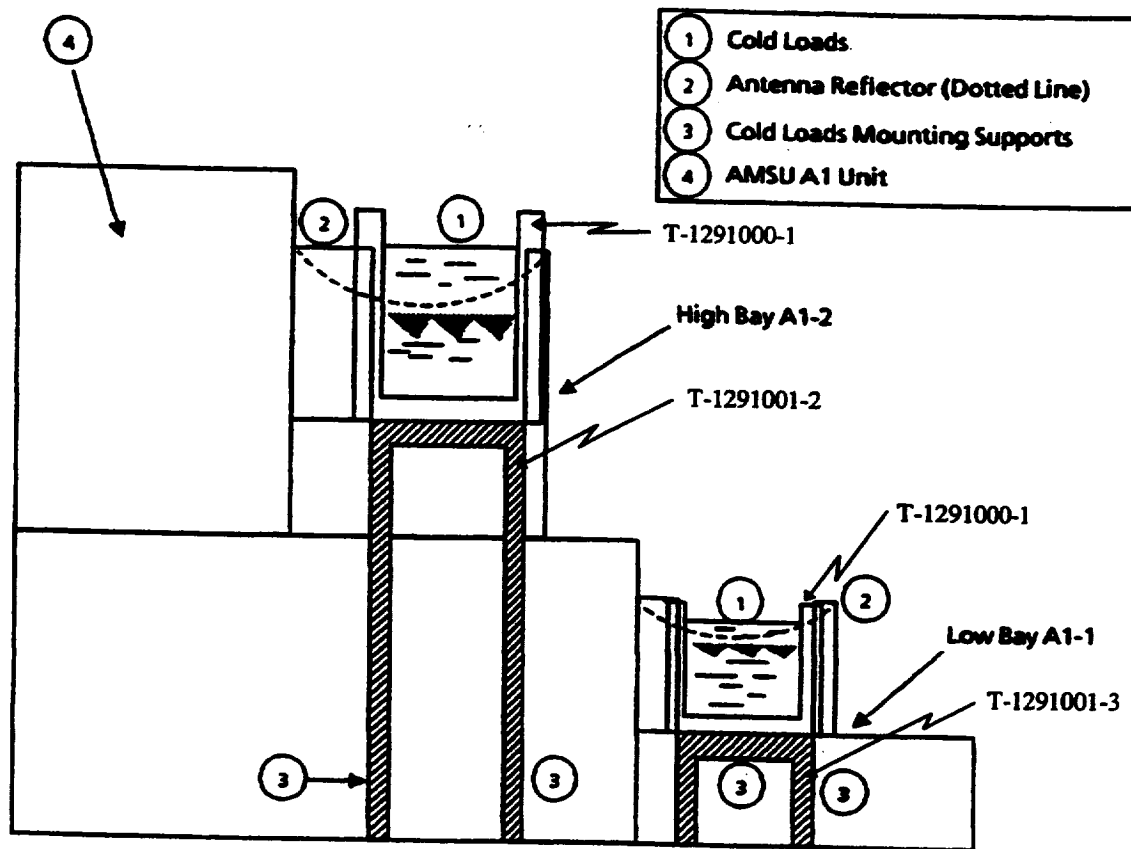


Figure 29. NEAT Setup Configuration

3.2.4.4.2.2 Relative NEAT data collection

1. Return to the Main Menu by pressing [1] RETURN.
2. On the Main Menu, select [13] FUNCTIONAL TEST. (The STE will automatically command the unit to position the antenna reflector to the warm and cold loads as it is taking data.)
3. Wait approximately one minute to verify that the NEAT results are displayed on the screen. Obtain a printout. Repeat step 2 four times and obtain four additional printouts. Average NEAT from these five data points. Enter the values on TDS 50. Attach the printout to the data sheet.
4. Repeat steps 1, 2, and 3 for the PLLO No. 2. Allow 30 minutes for the unit to stabilize after switching to PLLO No. 2.
5. Remove the cold loads and associated hardware.

3.2.4.5 Channel identification test. The purpose of the channel identification test is to verify the proper final configuration /assembly of each radiometer channel from antenna input to the spacecraft interface.

1. Configure the unit and test equipment as shown in Figures 26 and 32.
2. Connect the STE to instrument using the following STE interface cables.

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- a. STE interface cable J1 (1356648-1)
 - b. STE interface cable J2 (1356648-2)
 - c. STE interface cable J3 (1356648-3)
 - d. STE interface cable J4 (1356648-4)
3. Follow the turn-on procedure per para. 3.2.3.5.
 4. Enter the STE command "SCANNER A1-1 POWER." Wait 18 seconds before issuing the next command.
 5. Enter the STE command "SCANNER A1-2 POWER." Wait 18 seconds before issuing the next command.
 6. Enter the STE command "ANTENNA COLD CAL." Wait 18 seconds before issuing the next command. Both reflectors should scan to the cold calibration beam position.
 7. Enter the STE command "[1] RETURN" to return to the monitor only screen.
 8. Enter the STE command "[10] DIGITAL-A." The STE should now display the digital-A data screen shown in Figure 30. From this screen enter the STE command "[9] BEAM POSITION NN-ALL CHANNELS."
 9. The STE then asks "ENTER BEAM POSITION NO (1 TO 30)." Enter "30" to show the radiometric counts data for channels 3-15. The STE should now display the radiometric data screen shown in Figure 31, except with a different set of count data.
 10. Allow the instrument to stabilize for approximately 20 minutes. Enter the STE command "[2]" to obtain a screen only printout.
 11. Configure the unit and test equipment as shown in Figure 32. Turn ON the sweeper and allow to warm up approximately 10 minutes. Make sure that the RF power is OFF during sweeper warm up.

CAUTION

Extreme care must be used when turning on RF power. When RF power is first applied the multiplier/gain horn should be approximately three to four feet from the unit. The RF power setting should be no greater than -20 dBm.

12. Set the sweeper frequency to 50.35 ± 0.01 GHz and set the RF power level to -20 dBm. Position the multiplier/gain horn three to four feet from the instrument so that the A1-2 antenna and gain horn are approximately aligned (see Figure 32). Rotate the gain horn, if needed, to the vertical polarization position.
13. Turn ON the RF power making sure the power level is set to -20 dBm. Allow the multiplier to warm up approximately five minutes.
14. At the STE screen compare the radiometric data counts of channel 3 to the counts printed out at step 10. Enter the STE command "[2]" to obtain a screen only printout.
15. From the printouts obtained in steps 10 and 14, verify that the radiometric data counts for channel 3 have increased significantly, approximately 1000 or more, and that the other channels' data counts have remained relatively unchanged, less than 300 counts.
16. Record the counts difference on TDS 52 of channel 3 from the printouts obtained in steps 10 and 14 and attach printouts to TDS 52.
17. Repeat steps 12 through 16 for the frequencies and polarizations listed on TDS 52.

18. After all A1 channels have been identified, turn OFF the RF power. Return the reflectors to the warm cal position.
19. Turn the STE Q/Main and N/Pulse switches to OFF.
20. Turn the STE power supply panel main power switch OFF.

EOS	A1-03 E1.EXE:31 COLD CAL MODE		P15-JUN-98	09:36:59 SCAN NUMBER 34
[5]	SCIENCE DATA	ELEMENT 0000		
[6]	CONTROL/STATUS	ELEMENT 00		
[7]	ENGINEERING	ELEMENT 00		
[8]	DATA STREAM (64 VALUES)			
[9]	BEAM POSITION NN-ALL CHANNELS			
[10]	CHANNEL NN -ALL BEAM POSITIONS			
[11]	WARM CALIBRATE			
[12]	COLD CALILBRATE			
[13]	REFLECTOR POSITIONS			
[14]	TEMPERATURE DATA (16 VALUES)			
ENGR OK	POWER	ON	CHECKSUM IN 15A1 SA28	34SA29 47
SELECT BUTTON 2		SCREEN ONLY [2]	PRINT [3]	FULL [1] RETURN

Figure 30. Digital-A Data Screen

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EOS	A1-03 E1.EXE;31	COLD CAL MODE	P15-JUN-98	09:49:07	SCAN NUMBER	11
[5]	SCIENCE DATA	ELEMENT	0000			
[6]	CONTROL/STATUS	ELEMENT	00			
[7]	ENGINEERING	ELEMENT	00			
RADIOMETRIC DATA						
BEAM POSITION						
CH	DATA	CH	DATA	CH	DATA	
3	15798	8	15414	13	15811	
4	16252	9	16176	14	16029	
5	15661	10	16010	15	15102	
6	16413	11	15639			
7	18044	12	15817			
[21]	UP	[22]	DOWN			
ENGR OK	POWER	ON	CHECKSUM	IN DF5D	CALC DFSD	SA28 11 SA29 14
SELECT BUTTON 2						

Figure 31. Radiometric Data Screen

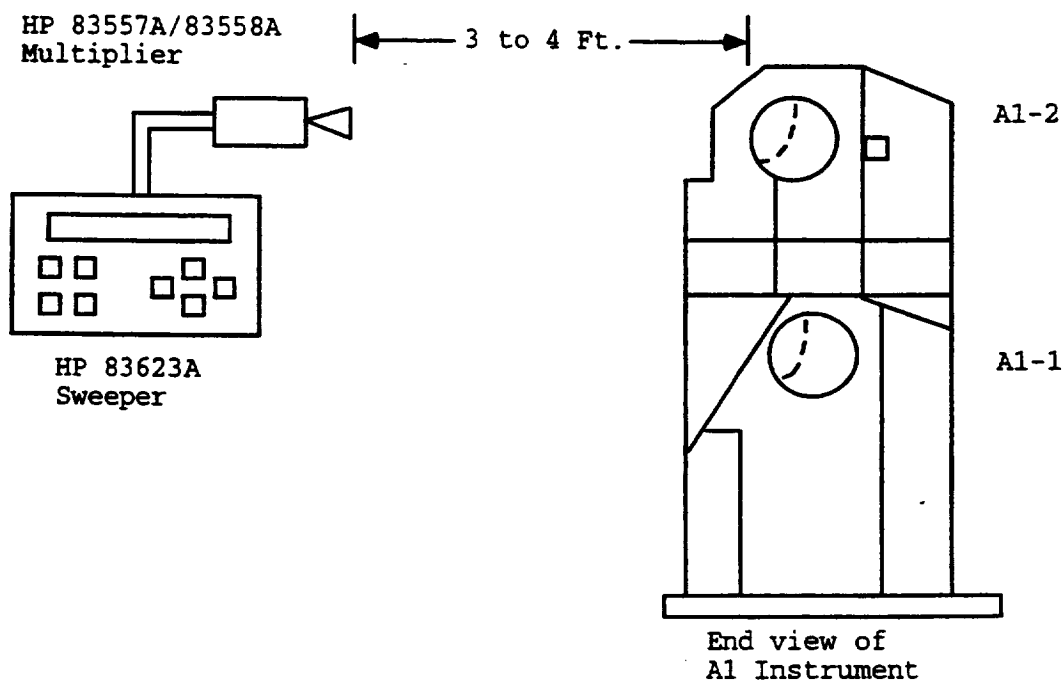


Figure 32. Channel Identification Setup

4. QUALITY ASSURANCE PROVISIONS

4.1 Responsibility for inspection. Aerojet Quality Assurance shall inspect in accordance with the requirements of this test procedure and S-480-79 and S-480-80. Quality Control shall verify all test set-ups prior to start of test. Bonded software shall be used for all tests and shall be obtained from Quality Control. Quality Control shall review all test data for conformance to success criteria. The test data shall include test limits. For tests that satisfy requirements from S-480-80 on protoflight and flight units, customer representatives shall be invited to monitor tests and shall be invited to review the data and show approval on the test data sheets.

4.1.1 Test facilities. Unless otherwise specified, the examinations and tests described herein shall be conducted at GenCorp Aerojet, Azusa Operations, Azusa, CA.

4.1.2 Electrostatic Device (ESD) handling. All electronic hardware shall be handled in accordance with Aerojet Standard STD-2454.

4.2 Monitoring procedures. All tests in this procedure shall be monitored by quality control.

4.2.1 Test equipment. Test equipment calibration procedures shall comply with the requirements of MIL-STD-45662.

4.2.2 Software. Bonded software shall be used at all times.

4.3 Monitoring procedures for materials. Not applicable.

4.4 Certification. Certification for handling ESD-sensitive equipment is required for all personnel working on the assembly and test of the AMSU-A instrument, per STD-2454.

4.5 Test methods

4.5.1 Accept-reject criteria. The accept-reject criteria for each examination or test shall be as specified in the data sheets included in each phase of the applicable test procedure. The test results shall be recorded on the data sheets to demonstrate compliance with the applicable specification requirements. Methods of analysis shall be appropriate for the parameters being inspected. It shall be the responsibility of Aerojet to review the test data and determine conformance of the unit under test to the performance requirements contained in S-480-80 and this specification.

In the event of a failure during any phase of this test procedure, the test activity shall record the required information on the Test Anomaly Record (TAR) and alert the design assurance and quality engineers. Except for failures which only represent a limited out-of-tolerance condition for a particular parameter and are not expected to interfere with the balance of the testing and which are non-destructive, the testing must be stopped until a complete description of the observed anomaly failure is documented and a Failure Analysis Strategy (FAS) is formulated, documented, and implemented to preclude loss of information or evidence that may facilitate determining the failure cause. The full set of data from the referenced tests is required in order to formulate a plan of action. The cognizant reliability engineer, quality assurance engineer, and the system or responsible test engineer shall jointly develop the FAS which must be approved by Design Assurance and Quality Assurance. Analysis and reporting shall be performed per Aerojet procedures.

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4.5.2 General. All data sheets associated with the tests on the unit plus the data reduction and analysis of specific parameters required by each applicable test procedure obtained from screen printouts and plots, oscilloscope photographs, or magnetic recordings shall be included with the associated shop order. During tests in which a CRT screen is to be printed or plotted and retained as a data sheet, the following annotation shall be applied:

Test/Systems Engineer:
(Signature)

Quality Control:
(Signature)

Customer Representative
(Flight Hardware Only):

(Signature)

Date:

Test Paragraph No.:

Subassembly/Assembly Serial No.:

Shop Order No.:

4.5.2.1 Test data. The test data shall be that which was obtained during performance of the tests specified and recorded on the Test Data Sheet(s) (TDS) (see Appendix A) and on printouts and plots and shall be attached to the shop order associated with the test.

5. PREPARATION FOR DELIVERY

This section is not applicable to this specification.

6. NOTES

6.1 *Acronyms and abbreviations*

AMSU	Advanced Microwave Sounding Unit
ATB	Analog telemetry bus
AWG	American Wire Gage
BP	Beam Position
CAL	Calibrate
CPT	Comprehensive performance test
d	delta
DC	Direct current
DVM	Digital volt meter
EMI	Electromagnetic interference
ESD	Electrostatic Sensitive Device
EXT	External
FAS	Failure analysis strategy
GHz	Gigahertz
GIIS	General Instrument Interface Specification
GND	Ground
GSE	Ground Support Equipment
HTR	Heater
kHz	Kilohertz
LPT	Limited performance test
LSB	Least significant bit
MA	Milliampere
METSAT	Meteorological Satellite
MLB	Main load bus
MFG	Manufacturer
MMW	Millimeter wave
MS, MSEC	Millisecond
MSB	Most significant bit
MV	Millivolt
NEAT	Noise equivalent delta temperature
PFM	Protoflight Model
PLB	Pulse load bus
PLL	Phase lock loop
PLLO	Phase lock loop oscillator

POS	Position
PWR	Power
RTN	Return
STE	Special Test Equipment
SW	
TAR	Test Anomaly Record
TDS	Test Data Sheet
TLM	Telemetry
TM	Instrument Temperature
UIIS	Unique Instrument Interface Specification
Vdc	Volts, direct current
μ s	Microsecond

6.2 Changes. The outside margins of this document have been marked to indicate where modifications, deletions, or additions have been made since the previous issue. This is done solely as a convenience to users, who are cautioned to evaluate the requirements of this document based on the entire content as written, regardless of the marginal notations and relationship to the previous issue.

APPENDIX A

TEST DATA SHEETS

10.1 Scope. This appendix contains the test data sheets for all tests and inspections listed in section 3.

TDS		Page
1	Grounding System Test.....	A-2
2	+28 MLB During Turn-on Transient.....	A-11
3	+28 MLB Operating Power.....	A-12
4	+28 Pulse Load Bus.....	A-13
5	+28 V Analog Telemetry Bus.....	A-15
6	+10V Interface Bus Voltage.....	A-16
7	Power Input Test for LPT.....	A-17
8	1.248 MHz Clock Signal Verification.....	A-18
9	"C1" Shift Pulse Verification.....	A-19
10	"A1" Select Pulse Verification.....	A-20
11	"8 Seconds" Frame Sync Pulse.....	A-21
12	Synchronization Signals Relationship.....	A-22
13	Synchronization Signals Relationship.....	A-24
14	Commands and Digital-B Telemetry Verification.....	A-25
15	Scanner Commands Verification.....	A-26
16	Scanner Commands Verification.....	A-27
17	Scanner Commands Verification.....	A-28
18	Scanner Positions Commands.....	A-29
19	Digital-A Data Output Full Scan Mode Synch Sequence, Unit LD/Serial Number and Digital-B Serial Data Verification.....	A-30
20	Reflector Positions Section [IV].....	A-31
21	Digital-A Data Output Radiometer Data Section [V].....	A-32
22	Full Scan Mode Temperature Sensors Section [VI].....	A-33
23	Digital-A Data Output Warm Cal Mode Synch Sequence, Unit LD/Serial Number and Digital-B Serial Data Verification.....	A-35
24	Reflector Position Warm Cal Mode Section [IV] and Reflector Position Nadir Mode Section [IV].....	A-36
25	Digital-A Data Output Warm Cal Mode Radiometer Data Section [V].....	A-37
26	Warm Cal Mode Temperature Sensors Section [VI].....	A-38
27	Digital-A Data Output Cold Cal Mode Synch Sequence, Unit LD/Serial Number and Digital-B Serial Data Verification.....	A-40
28	Reflector Position Warm Cal Mode Section [IV], Reflector Position Cold Cal Mode Section [IV], and Reflector Position Nadir Mode Section [IV].....	A-41
29	Digital-A Data Output Cold Cal Mode Radiometer Data Section [V].....	A-43
30	Cold Cal Mode Temperature Sensors Section [VI].....	A-44
31	Digital-A Data Output Nadir Mode Synch Sequence, Unit LD/Serial Number and Digital-B Serial Data Verification.....	A-46
32	Digital-A Data Output Nadir Mode Radiometer Data Section [V].....	A-47
33	Nadir Mode Temperature Sensors Section [VI].....	A-48
34	Analog Telemetry Verification by Way of Connector J6.....	A-50
35	Analog Telemetry Signals by Way of the STE.....	A-51
36	Integrate/Hold and Dump Signal Verification.....	A-53
37	Integration Time (Analog Output) Verification.....	A-54
38	Integration Time (Analog Output) Verification.....	A-55
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41	Integration Time (Analog Output) Verification.....	A-58
42	Integration Time (Analog Output) Verification.....	A-59
43	Integration Time (Analog Output) Verification.....	A-60
44	PLLO No. 1 Verification and PLLO No. 2 Verification.....	A-61
45	Digital-A/GSE Mode-1 Synch Sequence, Unit LD/Serial Number and Digital-B Serial Data Verification.....	A-62
46	Reflector Position.....	A-63
47	Digital-A/GSE Mode-1 Radiometer Data Section [V].....	A-65
48	Digital-A/GSE Mode-1 Temperature Sensors Section [VI].....	A-66
49	Receiver Input Signals.....	A-68
50	Radiometer "Relative" NEDT Verification.....	A-69
51	Transient Susceptibility Test.....	A-71
52	Channel Identification Test.....	A-73

TEST DATA SHEET 1 (Sheet 1 of 9)
Grounding System Test (Paragraph 3.2.4.1)

J1 of Spacecraft Interface				
From Chassis Ground to	Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J1-1	+28 V MLB	> 100k		
J1-2	+28 V MLB	> 100k		
J1-3	+28 V MLB RTN	> 100k		
J1-4	+28 V MLB RTN	> 100k		
J1-5	+28 V PLB	> 100k		
J1-6	+28 V PLB	> 100k		
J1-7	+28 V PLB RTN	> 100k		
J1-8	+28 V PLB RTN	> 100k		
J1-9	+28 V TMB	> 100k		
J1-10	28 V TMB RTN	> 100k		
J1-11	NO CONNECTION	> 100k		
J1-12	NO CONNECTION	> 100k		
J1-13	CHASSIS GROUND (E1)	< 1		
J1-14	+28 V MLB	> 100k		
J1-15	+28 V MLB	> 100k		
J1-16	+28 V MLB RTN	> 100k		
J1-17	+28 V MLB RTN	> 100k		
J1-18	+28 V PLB	> 100k		
J1-19	+28 V PLB	> 100k		
J1-20	+28 V PLB RTN	> 100k		
J1-21	+28 V PLB RTN	> 100k		
J1-22	+28 V TMB	> 100k		
J1-23	28 V TMB RTN	> 100k		
J1-24	SAFETY HTR PWR	> 100k		
J1-25	SAFETY HTR RTN	> 100k		

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TEST DATA SHEET 1 (Sheet 2 of 9)
Grounding Interface Test (Paragraph 3.2.4.1)

J2 of Spacecraft Interface				
From Chassis Ground to	Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J2-1	Chassis Ground (E2)	< 1		
J2-2	DATA CLOCK (C1)	> 100k		
J2-3	Signal Return	> 100k		
J2-4	No Connection	> 100k		
J2-5	DIGITAL-A DATA OUT	> 100k		
J2-6	DATA ENABLE (A1)	> 100k		
J2-7	8 SEC SYNC PULSE	> 100k		
J2-8	No Connection	> 100k		
J2-9	No Connection	> 100k		

J3 of Spacecraft Interface				
From Chassis Ground to	Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J3-1	1.248 MHz CLK	> 100k		
J3-2	1.248 MHz CLK RTN	> 100k		
J3-3	Chassis GND (E3)	< 1		

J5 of Spacecraft Interface				
From Chassis Ground to	Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J5-1	Chassis Ground (E5)	< 1		
J5-2	MODULE PWR IND	> 100k		
J5-3	COLD CAL POS MSB (OUT)	> 100k		
J5-4	No Connection	> 100k		
J5-5	SCANNER A1-2 ON/OFF	> 100k		
J5-6	ANT IN COLD CAL POS	> 100k		
J5-7	PLL PRI/RED	> 100k		
J5-8	No Connection	> 100k		
J5-9	SURV HTR ON/OFF	> 100k		
J5-10	No Connection	> 100k		
J5-11	COLD CAL POS LSB (OUT)	> 100k		
J5-12	SCANNER A1-1 ON/OFF	> 100k		
J5-13	ANT IN WARM CAL POS	> 100k		
J5-14	ANT IN NADIR POS	> 100k		
J5-15	FULL SCAN MODE	> 100k		

TEST DATA SHEET 1 (Sheet 3 of 9)
Grounding System Test (Paragraph 3.2.4.1)

J4 of Spacecraft Interface				
From Chassis Ground to	Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J4-1	Chassis Ground (E4)	< 1		
J4-2	MODULE PWR DISCONN	> 100k		
J4-3	SURVIVAL HTR ON	> 100k		
J4-4	MODULE TOTALLY OFF	> 100k		
J4-5	SCANNER A1-2 ON/OFF	> 100k		
J4-6	ANT AT COLD CAL POS	> 100k		
J4-7	PLL SELECT	> 100k		
J4-8	ANT AT NADIR POS	> 100k		
J4-9	COLD CAL POS MSB (IN)	> 100k		
J4-10	No Connection	> 100k		
J4-11	No Connection	> 100k		
J4-12	+10 V INTERFACE BUS	> 100k		
J4-13	10 V INTERFACE BUS RTN	> 100k		
J4-14	MODULE PWR CONN	> 100k		
J4-15	SURVIVAL HTR OFF	> 100k		
J4-16	SCANNER A1-1 ON/OFF	> 100k		
J4-17	ANT AT WARM CAL POS	> 100k		
J4-18	FULL SCAN	> 100k		
J4-19	COLD CAL POS LSB (IN)	> 100k		
J4-20	No Connection	> 100k		
J4-21	No Connection	> 100k		
J4-22	No Connection	> 100k		
J4-23	No Connection	> 100k		
J4-24	+10 V INTERFACE BUS	> 100k		
J4-25	10 V INTERFACE BUS RTN	> 100k		

TEST DATA SHEET 1 (Sheet 4 of 9)
Grounding System Test (Paragraph 3.2.4.1)

J6 of Spacecraft Interface				
From Chassis Ground to	Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J6-1	Chassis GND (E6)	< 1		
J6-2	RF SHELF A1-1 TEMP	> 100k		
J6-3	A1-1 SCAN. MTR. TEMP	> 100k		
J6-4	WARM LOAD A1-1 TEMP	> 100k		
J6-5	No Connection	> 100k		
J6-6	PLLO RED LOCK DETECT	> 100k		
J6-7	No Connection	> 100k		
J6-8	A1-1 DRIVE MTR CURR	> 100k		
J6-9	+15 V ANT DR MON	> 100k		
J6-10	+5 V ANT DR MON	> 100k		
J6-11	+15 V SIG PROC MON	> 100k		
J6-12	+5 V SIG PROC MON	> 100k		
J6-13	L.O. VOLTAGE CH 3 MON	> 100k		
J6-14	L.O. VOLTAGE CH 5 MON	> 100k		
J6-15	L.O. VOLTAGE CH 7 MON	> 100k		
J6-16	+15 VDC PLL LO MON	> 100k		
J6-17	+10 V MIXER/AMP MON	> 100k		
J6-18	L.O. VOLTAGE CH 15 MON	> 100k		
J6-19	No Connection	> 100k		
J6-20	28 V TMB RTN	> 100k		
J6-21	RF SHELF A1-2 TEMP	> 100k		
J6-22	A1-2 SCAN MTR TEMP	> 100k		
J6-23	WARM LOAD A1-2 TEMP	> 100k		
J6-24	No Connection	> 100k		
J6-25	PLLO PRI LOCK DETECT	> 100k		
J6-26	No Connection	> 100k		
J6-27	A1-2 DRIVE MTR CURR	> 100k		
J6-28	-15 V ANT DR MON	> 100k		
J6-29	-15 V SIG PROC MON	> 100k		
J6-30	L.O. VOLTAGE CH 4 MON	> 100k		
J6-31	L.O. VOLTAGE CH 6 MON	> 100k		
J6-32	L.O. VOLTAGE CH 8 MON	> 100k		
J6-33	-15 VDC PLL LO MON	> 100k		
J6-34	+8 V IF AMP MON	> 100k		
J6-35	No Connection	> 100k		
J6-36	No Connection	> 100k		
J6-37	No Connection	> 100k		

TEST DATA SHEET 1 (Sheet 5 of 9)
Grounding System Test (Paragraph 3.2.4.1)

J7 of Spacecraft Interface				
From Chassis Ground to	Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J7-1	Chassis GND (E7)	< 1		
J7-2	No Connection	> 100k		
J7-3	REDUN PLO LOCK DET	> 100k		
J7-4	15 V RTN (2/3)	> 100k		
J7-5	15 V RTN (2/3)	> 100k		
J7-6	DUMP TEST POINT	> 100k		
J7-7	No Connection	> 100k		
J7-8	CH3 OUT TEST POINT	> 100k		
J7-9	CH4 OUT TEST POINT	> 100k		
J7-10	CH5 OUT TEST POINT	> 100k		
J7-11	CH6 OUT TEST POINT	> 100k		
J7-12	CH7 OUT TEST POINT	> 100k		
J7-13	CH8 OUT TEST POINT	> 100k		
J7-14	CH9 OUT TEST POINT	> 100k		
J7-15	No Connection	> 100k		
J7-16	No Connection	> 100k		
J7-17	GSE CMD LSB	> 100k		
J7-18	GSE CMD MSB-1	> 100k		
J7-19	+5 V GSE INTERLOCK A	> 100k		
J7-20	No Connection	> 100k		
J7-21	No Connection	> 100k		
J7-22	PRI PLO LOCK DET	> 100k		
J7-23	No Connection	> 100k		
J7-24	I/H TEST POINT	> 100k		
J7-25	No Connection	> 100k		
J7-26	15 V RTN (2/3)	> 100k		
J7-27	CH10 OUT TEST POINT	> 100k		
J7-28	CH11 OUT TEST POINT	> 100k		
J7-29	CH12 OUT TEST POINT	> 100k		
J7-30	CH13 OUT TEST POINT	> 100k		
J7-31	CH14 OUT TEST POINT	> 100k		
J7-32	CH15 OUT TEST POINT	> 100k		
J7-33	No Connection	> 100k		
J7-34	No Connection	> 100k		
J7-35	GSE CMD MSB	> 100k		
J7-36	5 V RTN (1)	> 100k		
J7-37	+5 V GSE INTERLOCK B	> 100k		

TEST DATA SHEET 1 (Sheet 6 of 9)
Grounding Interface Test (Paragraph 3.2.4.1)

Source Pin	Destination Pin	Source Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J1-1	J1-2	+28 V MLB	< 1		
J1-1	J1-14	+28 V MLB	< 1		
J1-1	J1-15	+28 V MLB	< 1		
J1-3	J1-4	28 V MLB RTN	< 1		
J1-3	J1-16	28 V MLB RTN	< 1		
J1-3	J1-17	28 V MLB RTN	< 1		
J1-5	J1-6	+28 V PLB	< 1		
J1-5	J1-18	+28 V PLB	< 1		
J1-5	J1-19	+28 V PLB	< 1		
J1-7	J1-8	28 V PLB RTN	< 1		
J1-7	J1-20	28 V PLB RTN	< 1		
J1-7	J1-21	28 V PLB RTN	< 1		
J1-9	J1-22	+28 V TMB	< 1		
J1-10	J1-23	28 V TMB RTN	< 1		
J1-10	J6-20	28 V TMB RTN	< 1		
J4-12	J4-24	+10 V INTERFACE BUS	< 1		
J4-13	J4-25	10 V INTERFACE BUS RTN	< 1		
J1-1	J1-3	+28 V MLB	> 100k		
J1-1	J1-5	+28 V MLB	> 100k		
J1-1	J1-7	+28 V MLB	> 100k		
J1-1	J1-9	+28 V MLB	> 100k		
J1-1	J1-10	+28 V MLB	> 100k		
J1-1	J1-24	+28 V MLB	> 100k		
J1-1	J1-25	+28 V MLB	> 100k		
J1-1	J2-3	+28 V MLB	> 100k		
J1-1	J4-12	+28 V MLB	> 100k		
J1-1	J4-13	+28 V MLB	> 100k		
J1-3	J1-5	28 V MLB RTN	> 100k		
J1-3	J1-7	28 V MLB RTN	> 100k		
J1-3	J1-9	28 V MLB RTN	> 100k		
J1-3	J1-10	28 V MLB RTN	> 100k		
J1-3	J1-24	28 V MLB RTN	> 100k		
J1-3	J1-25	28 V MLB RTN	> 100k		
J1-3	J2-3	28 V MLB RTN	> 100k		
J1-3	J4-12	28 V MLB RTN	> 100k		
J1-3	J4-13	28 V MLB RTN	> 100k		

TEST DATA SHEET 1 (Sheet 7 of 9)
Grounding Interface Test (Paragraph 3.2.4.1)

Source Pin	Destination Pin	Source Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J1-5	J1-7	+28 V PLB	> 100k		
J1-5	J1-9	+28 V PLB	> 100k		
J1-5	J1-10	+28 V PLB	> 100k		
J1-5	J1-24	+28 V PLB	> 100k		
J1-5	J1-25	+28 V PLB	> 100k		
J1-5	J2-3	+28 V PLB	> 100k		
J1-5	J4-12	+28 V PLB	> 100k		
J1-5	J4-13	+28 V PLB	> 100k		
J1-7	J1-9	28 V PLB RTN	> 100k		
J1-7	J1-10	28 V PLB RTN	> 100k		
J1-7	J1-24	28 V PLB RTN	> 100k		
J1-7	J1-25	28 V PLB RTN	> 100k		
J1-7	J2-3	28 V PLB RTN	> 100k		
J1-7	J4-12	28 V PLB RTN	> 100k		
J1-7	J4-13	28 V PLB RTN	> 100k		
J1-9	J1-10	+28 V TMB	> 100k		
J1-9	J1-24	+28 V TMB	> 100k		
J1-9	J1-25	+28 V TMB	> 100k		
J1-9	J2-3	+28 V TMB	> 100k		
J1-9	J4-12	+28 V TMB	> 100k		
J1-9	J4-13	+28 V TMB	> 100k		
J1-10	J1-24	28 V TMB RTN	> 100k		
J1-10	J1-25	28 V TMB RTN	> 100k		
J1-10	J2-3	28 V TMB RTN	> 100k		
J1-10	J4-12	28 V TMB RTN	> 100k		
J1-10	J4-13	28 V TMB RTN	> 100k		
J1-24	J1-25	SAFETY HTR PWR	> 100k		
J1-24	J2-3	SAFETY HTR PWR	> 100k		
J1-24	J4-12	SAFETY HTR PWR	> 100k		
J1-24	J4-13	SAFETY HTR PWR	> 100k		
J1-25	J2-3	SAFETY HTR PWR RTN	> 100k		
J1-25	J4-12	SAFETY HTR PWR RTN	> 100k		
J1-25	J4-13	SAFETY HTR PWR RTN	> 100k		
J2-3	J4-12	SIGNAL RTN	> 100k		
J2-3	J4-13	SIGNAL RTN	> 100k		
J4-12	J4-13	+10 V INTERFACE BUS	> 100k		

TEST DATA SHEET 1 (Sheet 8 of 9)
Grounding Interface Test (Paragraph 3.2.4.1)

Source Pin	Destination Pin	Source Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J2-2	J4-13	DATA CLOCK (C1)	> 2k		
J2-5	J4-13	DIGITAL-A DATA OUT	> 2k		
J2-6	J4-13	DATA ENABLE (A1)	> 2k		
J2-7	J4-13	8 SEC SYNC PULSE	> 2k		
J3-1	J4-13	1.248 MHZ CLK	> 2k		
J3-2	J4-13	1.248 MHZ CLK RTN	> 2k		
J4-2	J4-13	MODULE PWR DISCONN	> 2k		
J4-3	J4-13	SURVIVAL HTR ON	> 2k		
J4-4	J4-13	MODULE TOTALLY OFF	> 2k		
J4-5	J4-13	SCANNER A1-2 ON/OFF	> 2k		
J4-6	J4-13	ANT AT COLD CAL POS	> 2k		
J4-7	J4-13	PLL SELECT	> 2k		
J4-8	J4-13	ANT AT NADIR POS	> 2k		
J4-9	J4-13	COLD CAL POS MSB (IN)	> 2k		
J4-14	J4-13	MODULE PWR CONN	> 2k		
J4-15	J4-13	SURVIVAL HTR OFF	> 2k		
J4-16	J4-13	SCANNER A1-1 ON/OFF	> 2k		
J4-17	J4-13	ANT AT WARM CAL POS	> 2k		
J4-18	J4-13	FULL SCAN	> 2k		
J4-19	J4-13	COLD CAL POS LSB (IN)	> 2k		
J5-2	J4-13	MODULE PWR IND	> 2k		
J5-3	J4-13	COLD CAL POS MSB (OUT)	> 2k		
J5-5	J4-13	SCANNER A1-2 ON/OFF	> 2k		
J5-6	J4-13	ANT IN COLD CAL POS	> 2k		
J5-7	J4-13	PLL PRI/RED	> 2k		
J5-9	J4-13	SURV HTR ON/OFF	> 2k		
J5-11	J4-13	COLD CAL POS LSB (OUT)	> 2k		
J5-12	J4-13	SCANNER A1-1 ON/OFF	> 2k		
J5-13	J4-13	ANT IN WARM CAL POS	> 2k		
J5-14	J4-13	ANT IN NADIR POS	> 2k		
J5-15	J4-13	FULL SCAN MODE	> 2k		

TEST DATA SHEET 1 (Sheet 9 of 9)
Grounding Interface Test (Paragraph 3.2.4.1)

Source Pin	Destination Pin	Source Pin Description	Required Resistance (Ohms)	Measured Value (Ohms)	Pass/Fail
J6-2	J1-10	RF SHELF A1-1 TEMP	> 2k		
J6-3	J1-10	A1-1 SCAN MTR.TEMP	> 2k		
J6-4	J1-10	WARM LOAD A1-1 TEMP	> 2k		
J6-6	J4-13	PLLO RED LOCK DETECT	> 2k		
J6-8	J4-13	A1-1 DRIVE MTR CVR	> 2k		
J6-9	J4-13	+15 VDC ANT DRIVE MON	> 2k		
J6-10	J4-13	+5 VDC ANT DRIVE MON	> 2k		
J6-11	J4-13	+15 VDC SIG PROC MON	> 2k		
J6-12	J4-13	+5VDC SIG PROC MON	> 2k		
J6-13	J4-13	L.O. VOLTAGE CH3 MON	> 2k		
J6-14	J4-13	L.O. VOLTAGE CH5 MON	> 2k		
J6-15	J4-13	L.O. VOLTAGE CH7 MON	> 2k		
J6-16	J4-13	+15 VDC PLL LO MON	> 2k		
J6-17	J4-13	+10 V MIXER/AMP MON	> 2k		
J6-18	J4-13	L.O. VOLTAGE CH15 MON	> 2k		
J6-21	J4-10	RF SHELF A1-2 TEMP	> 2k		
J6-22	J4-10	A1-2 SCAN MTR.TEMP	> 2k		
J6-23	J4-10	WARM LOAD A1-2 TEMP	> 2k		
J6-25	J4-13	PLLO PRI LOCK DETECT	> 2k		
J6-27	J4-13	A1-2 DRIVE MTR CURR	> 2k		
J6-28	J4-13	-15 VDC ANT DRIVE MON	> 2k		
J6-29	J4-13	-15 VDC SIG PROC MON	> 2k		
J6-30	J4-13	L.O. VOLTAGE CH4 MON	> 2k		
J6-31	J4-13	L.O. VOLTAGE CH6 MON	> 2k		
J6-32	J4-13	L.O. VOLTAGE CH8 MON	> 2k		
J6-33	J4-13	-15 VDC PLL LO MON	> 2k		
J6-34	J4-13	IF AMP MON	> 2k		

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720 Shop Order: _____ S/N: _____

Test Systems Engineer **Date**

Customer Representative _____ Date _____
 (Flight Hardware Only)

Quality Control Date

6 Apr 99

TEST DATA SHEET 2
 +28 MLB During Turn-on Transient (Paragraph 3.2.4.2.1.1)

At 28.56 Vdc:

Step	Parameter	Measured/ Calculated	Required*		
			S/N 101-104	S/N 105 & up	Pass/ Fail
7	Time to reach steady state current	_____ms	20 ms max	300 ms max	
8	Peak Current	_____Amps	10.6 Amps	5.9 Amps	
10	Rate of Change (Slope): dI/dT	_____mA/μs	677 mA/μs	250 mA/μs	

At 27.44 Vdc:

Step	Parameter	Measured/ Calculated	Required*		
			S/N 101-104	S/N 105 & up	Pass/ Fail
7	Time to reach steady state current	_____ms	20 ms max	300 ms max	
8	Peak Current	_____Amps	10.6 Amps	5.9 Amps	
10	Rate of Change (Slope): dI/dT	_____mA/μs	677 mA/μs	250 mA/μs	

At 28.00 Vdc:

Step	Parameter	Measured/ Calculated	Required*		
			S/N 101-104	S/N 105 & up	Pass/ Fail
7	Time to reach steady state current	_____ms	20 ms max	300 ms max	
8	Peak Current	_____Amps	10.6 Amps	5.9 Amps	
10	Rate of Change (Slope): dI/dT	_____mA/μs	677 mA/μs	250 mA/μs	

* Refer to Figure 5.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer _____ Date _____

Customer Representative _____ Date _____
 (Flight Hardware Only)

Quality Control _____ Date _____

TEST DATA SHEET 3
+28 MLB Operating Power (Paragraph 3.2.4.2.1.2)

Step	+28V MLB at 27 Volts	Measured	Units	Required	Pass/Fail
2	+28 V MLB voltage at 27 V (V_b) (Measured)		Volts	27.0 ± 0.1	
3	Average Current (I_V) (PLLO#1)		Amps	N/A	N/A
4	+28 V MLB operating power = $I_V \times V_b$ (PLLO#1)		Watts	82 W max	
6	Average current (I_V) (PLLO#2)		Amps	N/A	N/A
7	+28 V MLB operating power = $I_V \times V_b$ (PLLO#2)		Watts	82 W max	
+28 V MLB at 28 Volts					
9	+28 V MLB bus voltage at 28 V (V_b) (Measured)		Volts	28.0 ± 0.1	
10	Average Current (I_V) (PLLO#1)		Amps	N/A	N/A
11	+28 V MLB operating power = $I_V \times V_b$ (PLLO#1)		Watts	82 W max	
13	Average current (I_V) (PLLO#2)		Amps	N/A	N/A
14	+28 V MLB operating power = $I_V \times V_b$ (PLLO#2)		Watts	82 W max	
+28 V MLB at 29 Volts					
16	+28 V MLB voltage at 29 V (V_b) (Measured)		Volts	29.0 ± 0.1	
17	Average Current (I_V) (PLLO#1)		Amps	N/A	N/A
18	+28 V MLB operating power = $I_V \times V_b$ (PLLO#1)		Watts	82 W max	
20	Average current (I_V) (PLLO#2)		Amps	N/A	N/A
21	+28 V MLB operating power = $I_V \times V_b$ (PLLO#2)		Watts	82 W max	

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer _____ Date _____

Customer Representative _____ Date _____
(Flight Hardware Only)

Quality Control _____ Date _____

6 Apr 99

TEST DATA SHEET 4 (Sheet 1 of 2)
+28 Pulse Load Bus (Paragraph 3.2.4.2.2.1-3.2.4.2.2.6)

Paragraph	Parameter	Measured or Calculated	Required	Pass/ Fail
3.2.4.2.2.1	From -0.1 to two seconds			
	Peak Current = I_p	___Amps	1.3 amps max	
3.2.4.2.2.2	From 2 to 4 seconds			
	Peak Current = I_p	___Amps	1.3 amps max	
3.2.4.2.2.3	From 4 to 6 seconds			
	Peak Current = I_p	___Amps	1.3 amps max	
3.2.4.2.2.4	From 6 to 8 seconds			
	Peak Current = I_p	___Amps	1.3 amps max	
3.2.4.2.2.5	Eight Sec. Integrated Current Measurement:			
	Current	___mA	None	
3.2.4.2.2.6	Turn-on Transient:			
	dI/dT	___mA/ μ s	744 mA/ μ s *	
	Peak Current = I_p	___Amps	11.5 Amps	

* Refer to Figure 9.

Bus current during the I/H, D period

Paragraph	Parameter	Measured or Calculated	Pass/ Fail
3.2.4.2.2.1	From -0.1 to 2 secs	mA	N/A
3.2.4.2.2.2	From 2 to 4 secs	mA	N/A
3.2.4.2.2.3	From 4 to 6 secs	mA	N/A
3.2.4.2.2.5	From 6 to 8 secs	mA	N/A

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

Bus current during warm cal, cold cal, & Nadir.

Paragraph	Parameter	Measured or Calculated	Pass/ Fail
3.2.4.2.2.7 (2)	Warm cal	mA	N/A
3.2.4.2.2.7 (3)	Cold cal	mA	N/A
3.2.4.2.2.7 (4)	Nadir	mA	N/A
3.2.4.2.2.7 (5)	Warm cal (motors off)	mA	N/A

METSAT/AMSU-A1 System P/N IS-1331720 Shop Order: _____ S/N: _____

Customer Representative _____ Date _____ Quality Control _____ Date _____
 (Flight Hardware Only)

6 Apr 99

TEST DATA SHEET 5
+28 V Analog Telemetry Bus (Paragraph 3.2.4.2.3)

Step	Parameter	Measured/ Calculated	Required	Pass/ Fail
3	+28 V ATB Bus Voltage (V_{at}) (Measured)	____ Volts	28.0 \pm 0.5	
4	Av. Current (I_a)	____ mA	7 mA max	
5	+28 V ATB Operating Power = $I_a \times V_{at}$	____ mW	200 mW max	

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

 Test Systems Engineer Date

 Customer Representative Date
 (Flight Hardware Only)

 Quality Control Date

+10 V Interface Bus Voltage (Paragraph 3.2.4.2.4)

Step	Parameter	Measured/ Calculated	Required	Pass/ Fail
3	Av. Current (I_a)	____ mA	10 mA max	
3	+10 V Interface Bus (V_{ib}) (Measured)	____ Volts	9.0 ± 1.0 V	
4	+10 V Interface Bus Power = $I_a \times V_{ib}$	____ mW	100 mW max	

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720 Shop Order: _____ S/N: _____

Test Systems Engineer
Date

Customer Representative _____ Date _____
 (Flight Hardware Only)

Quality Control **Date**

TEST DATA SHEET 7
Power Input Test for LPT (Paragraph 3.2.4.2.5)

Step	Parameter	Measured	Units	Required	Pass/ Fail
3	+28 V MLB Voltage (Vb) (Measured at connector J1)		Volts	28 \pm 0.5	
3	Current		Amps	Between 0.5 and 4.3 Amps	

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer Date

Customer Representative Date
(Flight Hardware Only)

Quality Control Date

TEST DATA SHEET 8

1.248 MHz Clock Signal Verification (Paragraph 3.2.4.3.2.1)

1.248 CLOCK SIGNAL
ATTACH PHOTOGRAPH OR PLOT HERE

Step	Parameter	Measured/ Calculated	Required	Pass/ Fail
5	Clock Frequency	____MHz	1.248 ±10%	
	Clock Amplitude	____Volts	9.0 ±1.0 V	

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720 Shop Order: _____ S/N: _____

Test Systems Engineer Date

Customer Representative _____ Date _____
 (Flight Hardware Only)

Quality Control
Date

TEST DATA SHEET 10
"A1" Select Pulse Verification (Paragraph 3.2.4.3.2.3)

"A1" SELECT PULSE
Attach Photograph or Plot Here

Parameter	Measured/ Calculated	Required	Pass/ Fail
Select Pulse Timing (F) *	___ μ s	961.5 μ s \pm 10%	
Select Pulse Amplitude	___ Volts	9.0 \pm 1.0 V	

* Refer to Figure 13 for location of the pulse timing F

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer Date

Customer Representative Date
(Flight Hardware Only)

Quality Control Date

"8 SECONDS" FRAME SYNC PULSE
Attach Photograph or Plot Here
(Record of "C" timing only is required)

Step	Parameter	Measured/ Calculated	Required	Pass/ Fail
1*	Frame Sync Pulse Timing (G)*	___ Sec	8 Sec $\pm 10\%$	
	Frame Sync Pulse Timing (C)*	___ μs	240.4 $\mu s \pm 10\%$	
	Frame Sync Pulse Amplitude	___ Volts	9.0 ± 1.0 V	

* Refer to Figure 13 for location of the timing pulses for G and C.

Circle Test: **CPT** **LPT**

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer
Date

Customer Representative _____ Date _____
(Flight Hardware Only)

Quality Control Date

Synchronization Signals Relationship (Paragraph 3.2.4.3.2.5)

A1 Select pulse and the 8 seconds Frame sync pulse.

ATTACH PHOTOGRAPH OR PLOT HERE

Verify that the sync pulse between H and C is as shown in Figure 19.

TIME MEASURED: _____

TIME REQUIRED: 1.2 ms \pm 10%

PASS/FAIL _____

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720 **Shop Order:** _____ **S/N:** _____

Test Systems Engineer **Date**

Customer Representative _____ Date _____
 (Flight Hardware Only)

Quality Control Date

TEST DATA SHEET 12 (Sheet 2 of 2)
Synchronization Signals Relationship (Paragraph 3.2.4.3.2.5)

A1 Select pulse and the C1 Shift pulse.

ATTACH PHOTOGRAPH OR PLOT HERE

Verify that the sync pulse between I and E is as shown in Figure 19.

TIME MEASURED: _____

TIME REQUIRED: 24 μ s \pm 1 μ s

PASS/FAIL _____

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer Date

Customer Representative Date
(Flight Hardware Only)

Quality Control Date

TEST DATA SHEET 13

Synchronization Signals Relationship (Paragraph 3.2.4.3.2.5)

A1 Select pulse and the 1.248 MHz clock.

Verify that the sync pulse between I and J is as shown in Figure 19.

PASS/FAIL _____

ATTACH PHOTOGRAPH OR PLOT HERE

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer
Date

Customer Representative _____ Date _____
(Flight Hardware Only)

Quality Control
Date

6 Apr 99

TEST DATA SHEET 14

Commands and Digital-B Telemetry Verification (Paragraphs 3.2.4.3.3.1, 3.2.4.3.3.2, 3.2.4.3.3.3, and 3.2.4.3.3.4)

Test	Digital-B Commands Verification Via STE			Visual Inspection		Pass/Fail
	Command	Observed	Required	Observed	Required	
3.2.4.3.3.1 Module Totally Off	Scanner A1-1		OFF		Antenna pointing to warm load.	
	Scanner A1-2		OFF		Antenna pointing to warm load.	
	Module Power		Disconnect	N/A	N/A	
	Survival Htr. Power.		OFF		28 V supply current=0	
3.2.4.3.3.2 Survival Heater Power	Survival Heater ON		ON	N/A	N/A	
	Survival Heater OFF		OFF	N/A	N/A	
3.2.4.3.3.3 Module Power Connect	Module Power		Connect		+28 V DC current is between 0.5 and 3.2 amps.	
3.2.4.3.3.4 PLL Power	PLLO#2		PLLO#2	N/A	N/A	
	PLLO#1		PLLO#1	N/A	N/A	

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer_____
Date_____
Customer Representative
(Flight Hardware Only)_____
Date_____
Quality Control_____
Date

TEST DATA SHEET 15
Scanner Commands Verification (Paragraph 3.2.4.3.3.5, Step 1)

Test	Digital "B" Verification			Pass/Fail
	Command	Observed	Required	
Full Scan	1 Module Power		CONNECT	
	2 Survival Heater		OFF	
	3 Scanner A1 Power		ON	
	4 Scanner A2 Power		ON	
	5 Antenna Warm Cal Pos.		NO	
	6 Antenna Cold Cal Pos.		NO	
	7 Antenna NADIR Position		NO	
	8 Antenna Full Scan		YES	
	9 PLL Power		PLL#1	
	10 Cold MSB		0	
	11 Cold LSB		0	

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer Date

Customer Representative Date
(Flight Hardware Only)

Quality Control Date

6 Apr 99

TEST DATA SHEET 16
Scanner Commands Verification (Paragraph 3.2.4.3.3.5, Step 2)

Test	Digital "B" Verification			Pass/Fail
	Command	Observed	Required	
Full Scan	1 Module Power		CONNECT	
	2 Survival Heater		OFF	
	3 Scanner A1 Power		OFF	
	4 Scanner A2 Power		OFF	
	5 Antenna Warm Cal Pos.		NO	
	6 Antenna Cold Cal Pos.		NO	
	7 Antenna NADIR Position		NO	
	8 Antenna Full Scan		YES	
	9 PLL Power		PLLO#1	
	10 Cold MSB		0	
	11 Cold LSB		0	

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer_____
Date_____
Customer Representative
(Flight Hardware Only)_____
Date_____
Quality Control_____
Date

Scanner Commands Verification (Paragraph 3.2.4.3.3.5, Step 3)

Test	Digital "B" Verification			Pass/Fail
	Command	Observed	Required	
Full Scan	1 Module Power		CONNECT	
	2 Survival Heater		OFF	
	3 Scanner A1 Power		ON	
	4 Scanner A2 Power		ON	
	5 Antenna Warm Cal Pos.		NO	
	6 Antenna Cold Cal Pos.		NO	
	7 Antenna NADIR Position		NO	
	8 Antenna Full Scan		YES	
	9 PLL Power		PLLO#1	
	10 Cold MSB		0	
	11 Cold LSB		0	

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date _____

**Customer Representative
(Flight Hardware Only)**

Date _____

Quality Control

Date _____

A-29

TEST DATA SHEET 19

**Digital-A Data Output Full Scan Mode Synch Sequence,
Unit I.D./Serial Number and Digital-B Serial Data Verification
Sections [I], [III], and [III] (Paragraph 3.2.4.3.4.1)**

Step	Element (For Ref)	Description	Recorded Value	Required Value	Pass/Fail
[I]	0001	Sync Sequence Byte 1		255	
	0002	Sync Sequence Byte 2		255	
	0003	Sync Sequence Byte 3		255	
[II]	0004	Unit I.D. and Serial N		*	
[III]	0005	Digital-B Data Byte 1		2	
	0006	Digital-B Data Byte 2		**	
	0007	Digital-B Data Byte 3		0	
	0008	Digital-B Data Byte 4		0	

*** AMSU A1 Identification Words
(data entered in decimal system)**

Binary

Decimal

AMSU-A1 S/N 101

00000001

1

AMSU-A1 S/N 102

00000101

5

AMSU-A1 S/N 103

00001001

9

AMSU-A1 S/N 104

00001101

13

AMSU-A1 S/N 105

00010001

17

AMSU-A1 S/N 106

00010101

21

AMSU-A1 S/N 107

00011001

25

AMSU-A1 S/N 108

00011101

29

AMSU-A1 S/N 109

00100001

33

** Required value = 14 when PLL0 #1 is active; and = 6 when PLL0 #2 is active.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date _____

**Customer Representative
(Flight Hardware Only)**

Date _____

Quality Control

Date

6 Apr 99

TEST DATA SHEET 20
Reflector Positions Section [IV] (Paragraph 3.2.4.3.4.1)

BP	A1-1 Reflector				A1-2 Reflector			
	Element (For Ref)	Measured*	Required**	Pass/Fail	Element (For Ref)	Measured*	Required**	Pass/Fail
01	0014				0016			
02	0048				0050			
03	0082				0084			
04	0116				0118			
05	0150				0152			
06	0184				0186			
07	0218				0220			
08	0252				0254			
09	0286				0288			
10	0320				0322			
11	0354				0356			
12	0388				0390			
13	0422				0424			
14	0456				0458			
15	0490				0492			
16	0524				0526			
17	0558				0560			
18	0592				0594			
19	0626				0628			
20	0660				0662			
21	0694				0696			
22	0728				0730			
23	0762				0764			
24	0796				0798			
25	0830				0832			
26	0864				0866			
27	0890				0900			
28	0932				0934			
29	0966				0968			
30	1000				1002			
CC	1034				1036			
WC	1186				1188			

* Actual counts from computer printout. Rewriting counts on this data sheet is optional.

** Required range for instrument serial number from TDS 6 of AE-26002/1 ± 10 counts. Rewriting range on this data sheet is optional.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 21
Digital-A Data Output Radiometer Data Section [V] (Paragraph 3.2.4.3.4.1)

BP	A1-2 Channel-3 (50.3 GHz)				A1-1 Channel-9 (57.290344 GHz)			
	Element (For Ref)	Position*	Required**	Pass/Fail	Element (For Ref)	Position*	Required**	Pass/Fail
01	0018				0030			
02	0052				0064			
03	0086				0098			
04	0120				0132			
05	0154				0166			
06	0188				0200			
07	0222				0234			
08	0256				0268			
09	0290				0302			
10	0324				0336			
11	0356				0370			
12	0392				0404			
13	0426				0438			
14	0460				0472			
15	0494				0506			
16	0528				0540			
17	0562				0574			
18	0596				0608			
19	0630				0642			
20	0664				0676			
21	0698				0710			
22	0732				0744			
23	0766				0778			
24	0800				0812			
25	0834				0846			
26	0868				0880			
27	0902				0914			
28	0936				0948			
29	0970				0982			
30	1004				1016			
CC	1038				1050			
WC	1190				1202			

* Actual counts from computer printout. Rewriting counts on this data sheet is optional.
 ** Required = 16,500 ± 4000 counts.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720 Shop Order: _____ S/N: _____

Test Systems Engineer Date

Customer Representative Date
(Flight Hardware Only)

Quality Control Date

6 Apr 99

TEST DATA SHEET 22 (Sheet 1 of 2)
Full Scan Mode Temperature Sensors Section [VI] (Paragraph 3.2.4.3.4.1)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1090	A1-1 Warm Load 1		25 ± 15	
1092	A1-1 Warm Load 2		25 ± 15	
1094	A1-1 Warm Load 3		25 ± 15	
1096	A1-1 Warm Load 4		25 ± 15	
1098	A1-1 Warm Load Center		25 ± 15	
1100	A1-2 Warm Load 1		25 ± 15	
1102	A1-2 Warm Load 2		25 ± 15	
1104	A1-2 Warm Load 3		25 ± 15	
1106	A1-2 Warm Load 4		25 ± 15	
1108	A1-2 Warm Load Center		25 ± 15	
1110	Local Oscillator Channel 7		25 ± 15	
1112	Local Oscillator Channel 8		25 ± 15	
1114	Local Oscillator Channel 15		25 ± 15	
1116	PLL LO #2 Channels 9-14		25 ± 15	
1118	PLL LO #1 Channels 9-14		25 ± 15	
1120	PLLO (Reference Oscillator)**/ Not used ***		25 ± 15	
1122	Mixer I.F. Amp. Channel 3		25 ± 15	
1124	Mixer I.F. Amp. Channel 4		25 ± 15	
1126	Mixer I.F. Amp. Channel 5		25 ± 15	
1128	Mixer I.F. Amp. Channel 6		25 ± 15	
1130	Mixer I.F. Amp. Channel 7		25 ± 15	
1132	Mixer I.F. Amp. Channel 8		25 ± 15	
1134	Mixer I.F. Amp. Channels 9-14		25 ± 15	
1136	Mixer I.F. Amp. Channel 15		25 ± 15	

* Value is from the STE printout sheets. Copying data to this sheet is optional.

** For S/N 101 through 104.

*** For S/N 105 and up.

(Continued on Sheet 2)

TEST DATA SHEET 22 (Sheet 2 of 2)
Full Scan Mode Temperature Sensors Section [VI (Paragraph 3.2.4.3.4.1)]

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1138	I.F. Amp. Channel 11-14		25 ± 15	
1140	I.F. Amp. Channel 9		25 ± 15	
1142	I.F. Amp. Channel 10		25 ± 15	
1144	I.F. Amp. Channel 11		25 ± 15	
1146	DC/DC Converter		25 ± 15	
1148	I.F. Amp. Channel 13		25 ± 15	
1150	I.F. Amp. Channel 14		25 ± 15	
1152	I.F. Amp. Channel 12		25 ± 15	
1154	RF Shelf A1-1		25 ± 15	
1156	RF Shelf A1-2		25 ± 15	
1158	Detector Preamp Assy.		25 ± 15	
1160	Scan Motor A1-1		25 ± 15	
1162	Scan Motor A1-2		25 ± 15	
1164	Feed Horn A1-1		25 ± 15	
1166	Feed Horn A1-2		25 ± 15	
1168	R.F. Mux A1-1		25 ± 15	
1170	R.F. Mux A1-2		25 ± 15	
1172	Local Oscillator Channel 3		25 ± 15	
1174	Local Oscillator Channel 4		25 ± 15	
1176	Local Oscillator Channel 5		25 ± 15	
1178	Local Oscillator Channel 6		25 ± 15	
1180	Temp Sensor Ref Voltage Count		**	

* Value is from the STE printout sheets. Copying data to this sheet is optional.

** = Count of 24,552 + 1765, - 1308.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date _____

**Customer Representative
(Flight Hardware Only)**

Date _____

Quality Control

Date _____

6 Apr 99

TEST DATA SHEET 23

Digital-A Data Output Warm Cal Mode Synch Sequence,
Unit I.D./Serial Number and Digital-B Serial Data Verification
Sections [I], [II], and [III] (Paragraph 3.2.4.3.4.2)

Step	Element (For Ref)	Description	Recorded Value	Required Value	Pass/Fail
[I]	0001	Sync Sequence Byte 1		255	
	0002	Sync Sequence Byte 2		255	
	0003	Sync Sequence Byte 3		255	
[II]	0004	Unit I.D. and Serial N		*	
[III]	0005	Digital-B Data Byte 1		4	
	0006	Digital-B Data Byte 2		14	
	0007	Digital-B Data Byte 3		0	
	0008	Digital-B Data Byte 4		0	
* AMSU A1 Identification Words (data entered in decimal system)					
			Binary	Decimal	
AMSU-A1 S/N 101			00000001	1	
AMSU-A1 S/N 102			00000101	5	
AMSU-A1 S/N 103			00001001	9	
AMSU-A1 S/N 104			00001101	13	
AMSU-A1 S/N 105			00010001	17	
AMSU-A1 S/N 106			00010101	21	
AMSU-A1 S/N 107			00011001	25	
AMSU-A1 S/N 108			00011101	29	
AMSU-A1 S/N 109			00100001	33	

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720 Shop Order: _____ S/N: _____

Test Systems Engineer Date

Customer Representative Date

(Flight Hardware Only) _____
Quality Control Date

TEST DATA SHEET 24

Reflector Position Warm Cal Mode Section [IV] and Reflector Position Nadir Mode Section [IV] (Paragraphs 3.2.4.3.4.2 and 3.2.4.3.4.4)

BP	A1-1 Reflector			
	Para No.	Position*	Required**	Pass/Fail
WC	3.2.4.3.4.2			
15	3.2.4.3.4.4			
WC = Warm Cal 15 = Nadir Position				

BP	A1-2 Reflector			
	Para No.	Position*	Required**	Pass/Fail
WC	3.2.4.3.4.2			
15	3.2.4.3.4.4			
WC = Warm Cal 15 = Nadir Position				

* Actual counts from computer printout. Rewriting counts on this data sheet is optional.
 ** Required range for instrument serial number from TDS 6 of AE-26002/1 ± 10 counts. Rewriting range on this data sheet is optional.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer _____ Date _____

Customer Representative _____ Date _____
(Flight Hardware Only)

Quality Control _____ Date _____

6 Apr 99

TEST DATA SHEET 25

Digital-A Data Output Warm Cal Mode Radiometer Data Section [V] (Paragraph 3.2.4.3.4.2)

BP	A1-2 Channel-3 (50.3 GHz)				A1-1 Channel-9 (57.290344 GHz)			
	Element (For Ref)	Measured*	Required**	Pass/Fail	Element (For Ref)	Measured*	Required**	Pass/Fail
01	0018				0030			
02	0052				0064			
03	0086				0098			
04	0120				0132			
05	0154				0166			
06	0188				0200			
07	0222				0234			
08	0256				0268			
09	0290				0302			
10	0324				0336			
11	0356				0370			
12	0392				0404			
13	0426				0438			
14	0460				0472			
15	0494				0506			
16	0528				0540			
17	0562				0574			
18	0596				0608			
19	0630				0642			
20	0664				0676			
21	0698				0710			
22	0732				0744			
23	0766				0778			
24	0800				0812			
25	0834				0846			
26	0868				0880			
27	0902				0914			
28	0936				0948			
29	0970				0982			
30	1004				1016			
CC	1038		0		1050		0	
WC	1190		0		1202		0	

* Actual counts from computer printout. Rewriting counts on this data sheet is optional.

** Required = $16,500 \pm 4000$ counts.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer_____
Date_____
Customer Representative
(Flight Hardware Only)_____
Date_____
Quality Control_____
Date

TEST DATA SHEET 26 (Sheet 1 of 2)
Warm Cal Mode Temperature Sensors Section [VI] (Paragraph 3.2.4.3.4.2)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1090	A1-1 Warm Load 1		25 ± 15	
1092	A1-1 Warm Load 2		25 ± 15	
1094	A1-1 Warm Load 3		25 ± 15	
1096	A1-1 Warm Load 4		25 ± 15	
1098	A1-1 Warm Load Center		25 ± 15	
1100	A1-2 Warm Load 1		25 ± 15	
1102	A1-2 Warm Load 2		25 ± 15	
1104	A1-2 Warm Load 3		25 ± 15	
1106	A1-2 Warm Load 4		25 ± 15	
1108	A1-2 Warm Load Center		25 ± 15	
1110	Local Oscillator Channel 7		25 ± 15	
1112	Local Oscillator Channel 8		25 ± 15	
1114	Local Oscillator Channel 15		25 ± 15	
1116	PLL LO #2 Channels 9-14		25 ± 15	
1118	PLL LO #1 Channels 9-14		25 ± 15	
1120	PLLO (Reference Oscillator)**/ Not used ***			
1122	Mixer I.F. Amp. Channel 3		25 ± 15	
1124	Mixer I.F. Amp. Channel 4		25 ± 15	
1126	Mixer I.F. Amp. Channel 5		25 ± 15	
1128	Mixer I.F. Amp. Channel 6		25 ± 15	
1130	Mixer I.F. Amp. Channel 7		25 ± 15	
1132	Mixer I.F. Amp. Channel 8		25 ± 15	
1134	Mixer I.F. Amp. Channels 9-14		25 ± 15	
1136	Mixer I.F. Amp. Channel 15		25 ± 15	

- * Value is from the STE printout sheets. Copying data to this sheet is optional.
 ** For S/N 101 through 104.
 *** For S/N 105 and up.

(Continued on Sheet 2)

* Value is from the STE printout sheets. Copying data to this sheet is optional.
 ** = Count of 24,552 + 1765 - 1308.

Date _____

TEST DATA SHEET 27
Digital-A Data Output Cold Cal Mode Synch Sequence,
Unit I.D./Serial Number and Digital-B Serial Data Verification
Sections [I], [II], and [III] (Paragraph 3.2.4.3.4.3)

Step	Element (For Ref)	Description	Recorded Value	Required Value	Pass/Fail
[I]	0001	Sync Sequence Byte 1		255	
	0002	Sync Sequence Byte 2		255	
	0003	Sync Sequence Byte 3		255	
[II]	0004	Unit I.D. and Serial N		*	
[III]	0005	Digital-B Data Byte 1		8	
	0006	Digital-B Data Byte 2		14	
	0007	Digital-B Data Byte 3		0	
	0008	Digital-B Data Byte 4		0	

* AMSU A1 Identification Words
(data entered in decimal system)

Binary

Decimal

AMSU-A1 S/N 101

00000001

1

AMSU-A1 S/N 102

00000101

5

AMSU-A1 S/N 103

00001001

9

AMSU-A1 S/N 104

00001101

13

AMSU-A1 S/N 105

00010001

17

AMSU-A1 S/N 106

00010101

21

AMSU-A1 S/N 107

00011001

25

AMSU-A1 S/N 108

00011101

29

AMSU-A1 S/N 109

00100001

33

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

6 Apr 99

TEST DATA SHEET 28 (Sheet 1 of 2)

Reflector Position Warm Cal Mode Section [IV], Reflector Position Cold Cal Mode Section [IV], and Reflector Position Nadir Mode Section [IV] (Paragraphs 3.2.4.3.4.2, 3.2.4.3.4.3, and 3.2.4.3.4.4)

BP	A1-1 Reflector			
	Para No.	Position*	Required**	Pass/Fail
CC	3.2.4.3.4.3, Step 4			
	a.			
	b.			
	c.			
	d.			
CC = Cold Cal				
* Actual counts from computer printout. Rewriting counts on this data sheet is optional. ** Required range for instrument serial number from TDS 6 of AE-26002/1 ± 10 counts. Rewriting range on this data sheet is optional.				

3.2.4.3.4.3, Step 4 Substep	MSB	LSB
a.	0	0
b.	0	1
c.	1	0
d.	1	1

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer_____
Date_____
Customer Representative
(Flight Hardware Only)_____
Date_____
Quality Control_____
Date

TEST DATA SHEET 28 (Sheet 2 of 2)

Reflector Position Warm Cal Mode Section [IV], Reflector Position Cold Cal Mode Section [IV], and Reflector Position Nadir Mode Section [IV (Paragraphs 3.2.4.3.4.2, 3.2.4.3.4.3, and 3.2.4.3.4.4)

BP	A1-2 Reflector			
	Para No.	Position*	Required**	Pass/Fail
CC	3.2.4.3.4.3, Step 4			
	a.			
	b.			
	c.			
	d.			

CC = Cold Cal

* Actual counts from computer printout. Rewriting counts on this data sheet is optional.

** Required range for instrument serial number from TDS 6 of AE-26002/1 ± 10 counts. Rewriting range on this data sheet is optional.

3.2.4.3.4.3, Step 4 Substep	MSB	LSB
a.	0	0
b.	0	1
c.	1	0
d.	1	1

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer Date

Customer Representative Date
(Flight Hardware Only)

Quality Control Date

6 Apr 99

TEST DATA SHEET 29

Digital-A Data Output Cold Cal Mode Radiometer Data Section [V] (Paragraph 3.2.4.3.4.3)

Condition: Cold Cal Position MSB=0 and Cold Cal Position LSB=0

BP	A1-2 Channel-3 (50.3 GHz)				A1-1 Channel-9 (57.290344 GHz)			
	Element (For Ref)	Measured*	Required**	Pass/Fail	Element (For Ref)	Measured*	Required**	Pass/Fail
01	0018				0030			
02	0052				0064			
03	0086				0098			
04	0120				0132			
05	0154				0166			
06	0188				0200			
07	0222				0234			
08	0256				0268			
09	0290				0302			
10	0324				0336			
11	0356				0370			
12	0392				0404			
13	0426				0438			
14	0460				0472			
15	0494				0506			
16	0528				0540			
17	0562				0574			
18	0596				0608			
19	0630				0642			
20	0664				0676			
21	0698				0710			
22	0732				0744			
23	0766				0778			
24	0800				0812			
25	0834				0846			
26	0868				0880			
27	0902				0914			
28	0936				0948			
29	0970				0982			
30	1004				1016			
CC	1038		0		1050		0	
WC	1190		0		1202		0	

* Actual counts from computer printout. Rewriting counts on this data sheet is optional.

** Required = $16,500 \pm 4000$ counts.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer_____
Date_____
Customer Representative
(Flight Hardware Only)_____
Date_____
Quality Control_____
Date

TEST DATA SHEET 30 (Sheet 1 of 2)
Cold Cal Mode Temperature Sensors Section [VI] (Paragraph 3.2.4.3.4.3)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1090	A1-1 Warm Load 1		25 ± 15	
1092	A1-1 Warm Load 2		25 ± 15	
1094	A1-1 Warm Load 3		25 ± 15	
1096	A1-1 Warm Load 4		25 ± 15	
1098	A1-1 Warm Load Center		25 ± 15	
1100	A1-2 Warm Load 1		25 ± 15	
1102	A1-2 Warm Load 2		25 ± 15	
1104	A1-2 Warm Load 3		25 ± 15	
1106	A1-2 Warm Load 4		25 ± 15	
1108	A1-2 Warm Load Center		25 ± 15	
1110	Local Oscillator Channel 7		25 ± 15	
1112	Local Oscillator Channel 8		25 ± 15	
1114	Local Oscillator Channel 15		25 ± 15	
1116	PLL LO #2 Channels 9-14		25 ± 15	
1118	PLL LO #1 Channels 9-14		25 ± 15	
1120	PLLO (Reference Oscillator)**/ Not used ***			
1122	Mixer I.F. Amp. Channel 3		25 ± 15	
1124	Mixer I.F. Amp. Channel 4		25 ± 15	
1126	Mixer I.F. Amp. Channel 5		25 ± 15	
1128	Mixer I.F. Amp. Channel 6		25 ± 15	
1130	Mixer I.F. Amp. Channel 7		25 ± 15	
1132	Mixer I.F. Amp. Channel 8		25 ± 15	
1134	Mixer I.F. Amp. Channels 9-14		25 ± 15	
1136	Mixer I.F. Amp. Channel 15		25 ± 15	

* Value is from the STE printout sheets. Copying data to this sheet is optional.

** For S/N 101 through 104.

*** For S/N 105 and up.

(Continued on Sheet 2)

6 Apr 99

TEST DATA SHEET 30 (Sheet 2 of 2)
Cold Cal Mode Temperature Sensors Section [VI] (Paragraph 3.2.4.3.4.3)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1138	I.F. Amp. Channel 11-14		25 ± 15	
1140	I.F. Amp. Channel 9		25 ± 15	
1142	I.F. Amp. Channel 10		25 ± 15	
1144	I.F. Amp. Channel 11		25 ± 15	
1146	DC/DC Converter		25 ± 15	
1148	I.F. Amp. Channel 13		25 ± 15	
1150	I.F. Amp. Channel 14		25 ± 15	
1152	I.F. Amp. Channel 12		25 ± 15	
1154	RF Shelf A1-1		25 ± 15	
1156	RF Shelf A1-2		25 ± 15	
1158	Detector Preamp Assy.		25 ± 15	
1160	Scan Motor A1-1		25 ± 15	
1162	Scan Motor A1-2		25 ± 15	
1164	Feed Horn A1-1		25 ± 15	
1166	Feed Horn A1-2		25 ± 15	
1168	R.F. Mux A1-1		25 ± 15	
1170	R.F. Mux A1-2		25 ± 15	
1172	Local Oscillator Channel 3		25 ± 15	
1174	Local Oscillator Channel 4		25 ± 15	
1176	Local Oscillator Channel 5		25 ± 15	
1178	Local Oscillator Channel 6		25 ± 15	
1180	Temp Sensor Ref Voltage Count		**	

* Value is from the STE printout sheets. Copying data to this sheet is optional.

** = Count of 24,552 +1765,-1308.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 31
Digital-A Data Output Nadir Mode Synch Sequence,
Unit I.D./Serial Number and Digital-B Serial Data Verification
Sections [I], [II], and [III] (Paragraph 3.2.4.3.4.4)

Step	Element (For Ref)	Description	Recorded Value	Required Value	Pass/Fail
[I]	0001	Sync Sequence Byte 1		255	
	0002	Sync Sequence Byte 2		255	
	0003	Sync Sequence Byte 3		255	
[II]	0004	Unit I.D. and Serial N		*	
[III]	0005	Digital-B Data Byte 1		16	
	0006	Digital-B Data Byte 2		14	
	0007	Digital-B Data Byte 3		0	
	0008	Digital-B Data Byte 4		0	

* AMSU A1 Identification Words
(data entered in decimal system)

Binary

Decimal

AMSU-A1 S/N 101

00000001

1

AMSU-A1 S/N 102

00000101

5

AMSU-A1 S/N 103

00001001

9

AMSU-A1 S/N 104

00001101

13

AMSU-A1 S/N 105

00010001

17

AMSU-A1 S/N 106

00010101

21

AMSU-A1 S/N 107

00011001

25

AMSU-A1 S/N 108

00011101

29

AMSU-A1 S/N 109

00100001

33

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

6 Apr 99

TEST DATA SHEET 32

Digital-A Data Output Nadir Mode Radiometer Data Section [V] (Paragraph 3.2.4.3.4.4)

BP	A1-2 Channel-3 (50.3 GHz)				A1-1 Channel-9 (57.290344 GHz)			
	Element (For Ref)	Position*	Required**	Pass/Fail	Element (For Ref)	Position*	Required**	Pass/Fail
01	0018				0030			
02	0052				0064			
03	0086				0098			
04	0120				0132			
05	0154				0166			
06	0188				0200			
07	0222				0234			
08	0256				0268			
09	0290				0302			
10	0324				0336			
11	0356				0370			
12	0392				0404			
13	0426				0438			
14	0460				0472			
15	0494				0506			
16	0528				0540			
17	0562				0574			
18	0596				0608			
19	0630				0642			
20	0664				0676			
21	0698				0710			
22	0732				0744			
23	0766				0778			
24	0800				0812			
25	0834				0846			
26	0868				0880			
27	0902				0914			
28	0936				0948			
29	0970				0982			
30	1004				1016			
CC	1038		0		1050		0	
WC	1190		0		1202		0	

* Actual counts from computer printout. Rewriting counts on this data sheet is optional.

** Required = $16,500 \pm 4000$ counts (Unless otherwise indicated).

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer_____
Date_____
Customer Representative
(Flight Hardware Only)_____
Date_____
Quality Control_____
Date

6 Apr 99

TEST DATA SHEET 33 (Sheet 1 of 2)
Nadir Mode Temperature Sensors Section [VI] (Paragraph 3.2.4.3.4.4)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1090	A1-1 Warm Load 1		25 ± 15	
1092	A1-1 Warm Load 2		25 ± 15	
1094	A1-1 Warm Load 3		25 ± 15	
1096	A1-1 Warm Load 4		25 ± 15	
1098	A1-1 Warm Load Center		25 ± 15	
1100	A1-2 Warm Load 1		25 ± 15	
1102	A1-2 Warm Load 2		25 ± 15	
1104	A1-2 Warm Load 3		25 ± 15	
1106	A1-2 Warm Load 4		25 ± 15	
1108	A1-2 Warm Load Center		25 ± 15	
1110	Local Oscillator Channel 7		25 ± 15	
1112	Local Oscillator Channel 8		25 ± 15	
1114	Local Oscillator Channel 15		25 ± 15	
1116	PLL LO #2 Channels 9-14		25 ± 15	
1118	PLL LO #1 Channels 9-14		25 ± 15	
1120	PLLO (Reference Oscillator)**/ Not used ***		25 ± 15	
1122	Mixer I.F. Amp. Channel 3		25 ± 15	
1124	Mixer I.F. Amp. Channel 4		25 ± 15	
1126	Mixer I.F. Amp. Channel 5		25 ± 15	
1128	Mixer I.F. Amp. Channel 6		25 ± 15	
1130	Mixer I.F. Amp. Channel 7		25 ± 15	
1132	Mixer I.F. Amp. Channel 8		25 ± 15	
1134	Mixer I.F. Amp. Channels 9-14		25 ± 15	
1136	Mixer I.F. Amp. Channel 15		25 ± 15	

* Value is from the STE printout sheets. Copying data to this sheet is optional.

** For S/N 101 through 104.

*** For S/N 105 and up.

(Continued on Sheet 2)

6 Apr 99

TEST DATA SHEET 33 (Sheet 2 of 2)
Nadir Mode Temperature Sensors Section [VI] (Paragraph 3.2.4.3.4.4)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1138	I.F. Amp. Channel 11-14		25 ± 15	
1140	I.F. Amp. Channel 9		25 ± 15	
1142	I.F. Amp. Channel 10		25 ± 15	
1144	I.F. Amp. Channel 11		25 ± 15	
1146	DC/DC Converter		25 ± 15	
1148	I.F. Amp. Channel 13		25 ± 15	
1150	I.F. Amp. Channel 14		25 ± 15	
1152	I.F. Amp. Channel 12		25 ± 15	
1154	RF Shelf A1-1		25 ± 15	
1156	RF Shelf A1-2		25 ± 15	
1158	Detector Preamp Assy.		25 ± 15	
1160	Scan Motor A1-1		25 ± 15	
1162	Scan Motor A1-2		25 ± 15	
1164	Feed Horn A1-1		25 ± 15	
1166	Feed Horn A1-2		25 ± 15	
1168	R.F. Mux A1-1		25 ± 15	
1170	R.F. Mux A1-2		25 ± 15	
1172	Local Oscillator Channel 3		25 ± 15	
1174	Local Oscillator Channel 4		25 ± 15	
1176	Local Oscillator Channel 5		25 ± 15	
1178	Local Oscillator Channel 6		25 ± 15	
1180	Temp Sensor Ref Voltage Count		**	

* Value is from the STE printout sheets. Copying data to this sheet is optional.

** = Count of 24,552 +1765,-1308.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 34

Analog Telemetry Verification by Way of Connector J6 (Paragraph 3.2.4.3.5.1)

	From	Description	To	Measured (volts)	Required (volts)	Pass/Fail
03	J6-02	RF Shelf A1-1 Temp.	J1-10	_____	3.5 ± 2 V	_____
01	J6-03	A1-1 Scan Motor Temp.	J1-10	_____	3.5 ± 2 V	_____
05	J6-04	Warm Load A1-1 Temp.	J1-10	_____	3.5 ± 2 V	_____
04	J6-21	RF Shelf A1-2 Temp.	J1-10	_____	3.5 ± 2 V	_____
02	J6-22	A1-2 Scan Motor Temp.	J1-10	_____	3.5 ± 2 V	_____
06	J6-23	Warm Load A1-2 Temp.	J1-10	_____	3.5 ± 2 V	_____
25	J6-06	PLLO No. 2 Lock detect	J2-03	_____	***	_____
07	J6-08	A1-1 Drive Motor Curr.	J2-03	_____	3.5 ± 2 V	_____
10	J6-09	+15 V Antenna Drive	J2-03	_____	3.5 ± 2 V	_____
15	J6-10	+5 V Antenna Drive	J2-03	_____	3.5 ± 2 V	_____
09	J6-11	+15 V Signal Processing	J2-03	_____	3.5 ± 2 V	_____
14	J6-12	+5 V Signal Processing	J2-03	_____	3.5 ± 2 V	_____
22	J6-13	L.O. Voltage Channel 3	J2-03	_____	3.5 ± 2 V	_____
24	J6-14	L.O. Voltage Channel 5	J2-03	_____	3.5 ± 2 V	_____
20	J6-15	L.O. Voltage Channel 7	J2-03	_____	3.5 ± 2 V	_____
16	J6-16	+15 V PLL LO Ch 9-14	J2-03	_____	3.5 ± 2 V	_____
17	J6-17	*	J2-03	_____	3.5 ± 2 V	_____
27	J6-18	L.O. Voltage Channel 15	J2-03	_____	3.5 ± 2 V	_____
26	J6-25	PLLO No. 1 Lock detect	J2-03	_____	***	_____
08	J6-27	A1-2 Drive Motor Curr.	J2-03	_____	3.5 ± 2 V	_____
12	J6-28	-15 V Antenna Drive	J2-03	_____	3.5 ± 2 V	_____
11	J6-29	-15 V Signal Processing	J2-03	_____	3.5 ± 2 V	_____
23	J6-30	L.O. Voltage Channel 4	J2-03	_____	3.5 ± 2 V	_____
21	J6-31	L.O. Voltage Channel 6	J2-03	_____	3.5 ± 2 V	_____
19	J6-32	L.O. Voltage Channel 8	J2-03	_____	3.5 ± 2 V	_____
18	J6-33	-15 V PLL LO Ch 9-14	J2-03	_____	3.5 ± 2 V	_____
13	J6-34	**	J2-03	_____	3.5 ± 2 V	_____

* +8.5 V PLL LO Ch 9-14 for S/N 101-104, +10V Mixer Amp for S/N 105 and above.

**** +8 V Receiver for S/N 101-104, +8 V IF Amp for S/N 105 and above.**

*** 4.5 ±0.5 when locked, 0.5 ±0.5 when unlocked or OFF. One must be locked.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date _____

**Customer Representative
(Flight Hardware Only)**

Date _____

Quality Control

Date _____

(Continued on sheet 2)

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer
Date

Customer Representative _____ Date _____
 (Flight Hardware Only)

Quality Control Date

TEST DATA SHEET 35 (Sheet 2 of 2)
Analog Telemetry Signals by Way of the STE (Paragraph 3.2.4.3.5.2)

	Description	(*)	Measured (volts)	Required (volts)	Pass/ Fail
09	Signal Processing	+15 V	_____	15.0 ± 0.5 V	_____
10	Antenna Drive	+15 V	_____	15.0 ± 0.5 V	_____
11	Signal Processing	-15 V	_____	-15.0 ± 0.5 V	_____
12	Antenna Drive	-15 V	_____	-15.0 ± 0.5 V	_____
13	Receiver	+8 V	_____	8.0 ± 0.5 V	_____
14	Sig Processing	+5 V	_____	5.0 ± 0.5 V	_____
15	Antenna Drive	+5 V	_____	5.0 ± 0.5 V	_____
16	Phase Lock Loop Ch 9-14 (a)/ Receiver/Mixer IF (b)	+8.5 V +10 V	_____ _____	8.5 ± 0.5 V 10.0 ± 0.5 V	_____ _____
17	Phase Lock Loop Ch 9-14	+15 V	_____	15.0 ± 0.5 V	_____
18	Phase Lock Loop Ch 9-14	-15 V	_____	-15.0 ± 0.5 V	_____
19	L.O. #8	Ch-8	_____	(**)__ ± 0.5 V	_____
20	L.O. #7	Ch-7	_____	(**)__ ± 0.5 V	_____
21	L.O. #6	Ch-6	_____	(**)__ ± 0.5 V	_____
22	L.O. #3	Ch-3	_____	(**)__ ± 0.5 V	_____
23	L.O. #4	Ch-4	_____	(**)__ ± 0.5 V	_____
24	L.O. #5	Ch-5	_____	(**)__ ± 0.5 V	_____
25	PLLO No. 2 Lock Detect		_____	(***)	_____
26	PLLO No. 1 Lock Detect		_____	(***)	_____
27	L.O. #15	Ch-15	_____	(**)__ ± 0.5 V	_____

(*) Data from the printout sheet. Rewriting data on this space is optional.

(**) GDO voltages from the manufacturer data sheet for S/N 101-104; DRO CH3-8 10V, GDO CH15 15V for S/N 105 and above.

(***) Locked PLO voltage 0 to +15 V, other PLO voltage ±15.0 V; one must be locked for S/N 101-104. Locked PLO voltage 4.0 ± 1.0 V, other PLO voltage 0.0 ± 0.2 V, one must be locked for S/N 105 and above.

(a) For S/N 101 through 104. (b) For S/N 105 and up.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____

S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 36
Integrate/Hold and Dump Signal Verification (Paragraph 3.2.4.3.6.1)

ATTACH PHOTOGRAPH OR PLOT HERE

Parameter	Measured	Required	Pass/ Fail
Scope Channel-1: Integration/Hold			
Time Measured (A)*	ms	165 ms \pm 10%	
Time Measured (B)*	ms	35 ms \pm 10%	
Amplitude Measured	V	5.0 \pm 0.2 V	
Scope Channel-2: Dump Signal			
Time Measured (D)*	ms	9 ms to 15 ms	
Amplitude Measured	V	5.0 \pm 0.2 V	

* Refer to Figure 2 for waveform configuration.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 37
Integration Time (Analog Output) Verification (Paragraph 3.2.4.3.6.2)

ATTACH PHOTOGRAPH OR PLOT HERE

Channel _____03
Frequency: _____50.3 GHz

INTEGRATION (X) *
Measured _____ms
Required 165 ms \pm 10%
Pass/Fail _____

HOLD (B-D) *
Measured _____ms
Required 25 ms \pm 10%
Pass/Fail _____

DUMP (D) *
Measured _____ms
Required 9 ms to 15 ms
Pass/Fail _____

ATTACH PHOTOGRAPH OR PLOT HERE

Channel _____04
Frequency: _____52.8 GHz

INTEGRATION (X) *
Measured _____ms
Required 165 ms \pm 10%
Pass/Fail _____

HOLD (B-D) *
Measured _____ms
Required 25 ms \pm 10%
Pass/Fail _____

DUMP (D) *
Measured _____ms
Required 9 ms to 15 ms
Pass/Fail _____

* Refer to Figure 2 for waveform configuration.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720 Shop Order: _____ S/N: _____

Test Systems Engineer Date

Customer Representative Date
(Flight Hardware Only)

Quality Control Date

6 Apr 99

TEST DATA SHEET 38

Integration Time (Analog Output) Verification (Paragraph 3.2.4.3.6.2)

ATTACH PHOTOGRAPH OR PLOT HERE

Channel _____05

Frequency: _____53.596 GHz

INTEGRATION (X) *

Measured _____ms

Required 165 ms \pm 10%

Pass/Fail _____

HOLD (B-D) *

Measured _____ms

Required 25 ms \pm 10%

Pass/Fail _____

DUMP (D) *

Measured _____ms

Required 9 ms to 15 ms

Pass/Fail _____

ATTACH PHOTOGRAPH OR PLOT HERE

Channel _____06

Frequency: _____54.4 GHz

INTEGRATION (X) *

Measured _____ms

Required 165 ms \pm 10%

Pass/Fail _____

HOLD (B-D) *

Measured _____ms

Required 25 ms \pm 10%

Pass/Fail _____

DUMP (D) *

Measured _____ms

Required 9 ms to 15 ms

Pass/Fail _____

* Refer to Figure 2 for waveform configuration.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 39
Integration Time (Analog Output) Verification (Paragraph 3.2.4.3.6.2)

ATTACH PHOTOGRAPH OR PLOT HERE

Channel _____ 07
Frequency: _____ 54.94 GHz

INTEGRATION (X) *
Measured _____ ms
Required 165 ms \pm 10%
Pass/Fail _____

HOLD (B-D) *
Measured _____ ms
Required 25 ms \pm 10%
Pass/Fail _____

DUMP (D) *
Measured _____ ms
Required 9 ms to 15 ms
Pass/Fail _____

ATTACH PHOTOGRAPH OR PLOT HERE

Channel _____ 08
Frequency: _____ 55.5 GHz

INTEGRATION (X) *
Measured _____ ms
Required 165 ms \pm 10%
Pass/Fail _____

HOLD (B-D) *
Measured _____ ms
Required 25 ms \pm 10%
Pass/Fail _____

DUMP (D) *
Measured _____ ms
Required 9 ms to 15 ms
Pass/Fail _____

* Refer to Figure 2 for waveform configuration.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720 Shop Order: _____ S/N: _____

Test Systems Engineer Date

Customer Representative Date
(Flight Hardware Only)

Quality Control Date

Integration Time (Analog Output) Verification (Paragraph 3.2.4.3.6.2)

Channel 09
Frequency: 57.2903 GHz

INTEGRATION (X) *
Measured _____ms
Required 165 ms \pm 10%
Pass/Fail _____

HOLD (B-D) *
Measured _____ **ms**
Required 25 ms \pm 10%
Pass/Fail _____

DUMP (D) *
Measured _____ **ms**
Required 9 ms to 15 ms
Pass/Fail _____

Channel 10
Frequency: 57.2903 GHz

INTEGRATION (X) *
Measured _____ **ms**
Required 165 ms \pm 10%
Pass/Fail _____

HOLD (B-D) *
Measured _____ **ms**
Required 25 ms \pm 10%
Pass/Fail _____

DUMP (D) *
Measured _____ **ms**
Required 9 ms to 15 ms
Pass/Fail _____

* Refer to Figure 2 for waveform configuration.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720 Shop Order: _____ S/N: _____

Test Systems Engineer Date

Customer Representative _____ Date _____
(Flight Hardware Only)

Quality Control
Date

6 Apr 99

TEST DATA SHEET 41

Integration Time (Analog Output) Verification (Paragraph 3.2.4.3.6.2)

ATTACH PHOTOGRAPH OR PLOT HERE

Channel _____ 11
Frequency: _____ 57.3903 GHz

INTEGRATION (X) *

Measured _____ ms

Required 165 ms \pm 10%

Pass/Fail _____

HOLD (B-D) *

Measured _____ ms

Required 25 ms \pm 10%

Pass/Fail _____

DUMP (D) *

Measured _____ ms

Required 9 ms to 15 ms

Pass/Fail _____

ATTACH PHOTOGRAPH OR PLOT HERE

Channel _____ 12
Frequency: _____ 57.3903 GHz

INTEGRATION (X) *

Measured _____ ms

Required 165 ms \pm 10%

Pass/Fail _____

HOLD (B-D) *

Measured _____ ms

Required 25 ms \pm 10%

Pass/Fail _____

DUMP (D) *

Measured _____ ms

Required 9 ms to 15 ms

Pass/Fail _____

* Refer to Figure 2 for waveform configuration.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer_____
Date_____
Customer Representative
(Flight Hardware Only)_____
Date_____
Quality Control_____
Date

6 Apr 99

TEST DATA SHEET 42

Integration Time (Analog Output) Verification (Paragraph 3.2.4.3.6.2)

ATTACH PHOTOGRAPH OR PLOT HERE

Channel _____ 13

Frequency: _____ 57.3903 GHz

INTEGRATION (X) *

Measured _____ ms

Required 165 ms \pm 10%

Pass/Fail _____

HOLD (B-D) *

Measured _____ ms

Required 25 ms \pm 10%

Pass/Fail _____

DUMP (D) *

Measured _____ ms

Required 9 ms to 15 ms

Pass/Fail _____

ATTACH PHOTOGRAPH OR PLOT HERE

Channel _____ 14

Frequency: _____ 57.3903 GHz

INTEGRATION (X) *

Measured _____ ms

Required 165 ms \pm 10%

Pass/Fail _____

HOLD (B-D) *

Measured _____ ms

Required 25 ms \pm 10%

Pass/Fail _____

DUMP (D) *

Measured _____ ms

Required 9 ms to 15 ms

Pass/Fail _____

* Refer to Figure 2 for waveform configuration.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 43
Integration Time (Analog Output) Verification (Paragraph 3.2.4.3.6.2)

ATTACH PHOTOGRAPH OR PLOT HERE

Channel _____ 15
Frequency: _____ 89 GHz

INTEGRATION (X) *
Measured _____ ms
Required 165 ms \pm 10%
Pass/Fail _____

HOLD (B-D) *
Measured _____ ms
Required 25 ms \pm 10%
Pass/Fail _____

DUMP (D) *
Measured _____ ms
Required 9 ms to 15 ms
Pass/Fail _____

* Refer to Figure 2 for waveform configuration.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720 Shop Order: _____ S/N: _____

Test Systems Engineer Date

Customer Representative Date
(Flight Hardware Only)

Quality Control Date

TEST DATA SHEET 44
PLLO No. 1 Verification (Paragraph 3.2.4.3.6.3)
PLLO No. 2 Verification (Paragraph 3.2.4.3.6.4)

PLLO NO. 1

PLLO No. 1 dc Level _____

Required: *

Pass/Fail _____

PLLO NO. 2

PLLO No. 2 dc Level _____

Required: *

Pass/Fail _____

* -15 to +15 V dc level for S/N 101 - S/N 104, 4.0 ± 1.0 V for S/N 105 and above.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____

S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 45
Digital-A/GSE Mode-1 Synch Sequence,
Unit I.D./Serial Number and Digital-B Serial Data Verification
Sections [I], [II], and [III] (Paragraph 3.2.4.3.7.2)

Step	Element (For Ref)	Description	Recorded Value	Required Value	Pass/Fail
[I]	0001	Sync Sequence Byte 1		255	
	0002	Sync Sequence Byte 2		255	
	0003	Sync Sequence Byte 3		255	
[II]	0004	Unit I.D. and Serial N		*	
[III]	0005	Digital-B Data Byte 1		0	
	0006	Digital-B Data Byte 2		14	
	0007	Digital-B Data Byte 3		0	
	0008	Digital-B Data Byte 4		0	

* AMSU A1 Identification Words
(data entered in decimal system)

Binary

Decimal

AMSU-A1 S/N 101

00000001

1

AMSU-A1 S/N 102

00000101

5

AMSU-A1 S/N 103

00001001

9

AMSU-A1 S/N 104

00001101

13

AMSU-A1 S/N 105

00010001

17

AMSU-A1 S/N 106

00010101

21

AMSU-A1 S/N 107

00011001

25

AMSU-A1 S/N 108

00011101

29

AMSU-A1 S/N 109

00100001

33

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

6 Apr 99

TEST DATA SHEET 46 (Sheet 1 of 2)
Reflector Position (Paragraphs 3.2.4.3.7.2 - 3.2.4.3.7.7)

3.2.4.3.7.2 Digital-A/GSE Mode-1 Reflector Position Section [IV] ***

BP	A1-1 Reflector				A1-2 Reflector			
	Element (For Ref)	Position*	Required**	Pass/Fail	Element (For Ref)	Position*	Required**	Pass/Fail
06	0184				0186			
CC	354				356			
WC	694				696			

3.2.4.3.7.3 Digital-A/GSE Mode-2 Reflector Position Section [IV] ***

BP	A1-1 Reflector				A1-2 Reflector			
	Element (For Ref)	Position*	Required**	Pass/Fail	Element (For Ref)	Position*	Required**	Pass/Fail
01	0014				0016			

3.2.4.3.7.4 Digital-A/GSE Mode-3 Reflector Position Section [IV] ***

A1-1 Reflector			A1-2 Reflector		
Observed	Required**	Pass/Fail	Observed	Required**	Pass/Fail
	****			****	

- * Actual counts from computer printout. Rewriting counts on this data sheet is optional.
- ** Required range for instrument serial number from TDS 6 of AE-26002/1 ± 10 counts. Rewriting range on this data sheet is optional.
- *** GSE Modes do not require verification or testing for PFM & FM modules
- **** Observe that both A1-1 and A1-2 reflectors increment one step every 8 seconds.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 46 (Sheet 2 of 2)
Reflector Position (Paragraphs 3.2.4.3.7.2 - 3.2.4.3.7.7)

3.2.4.3.7.5 Digital-A/GSE Mode-4 Reflector Position Section [IV] ***

BP	A1-1 Reflector				A1-2 Reflector			
	Element (For Ref)	Position*	Required**	Pass/Fail	Element (For Ref)	Position*	Required**	Pass/Fail
30	1000				1002			

3.2.4.3.7.6 Digital-A/GSE Mode-5 Reflector Position Section [IV] ***

BP	A1-1 Reflector				A1-2 Reflector			
	Element (For Ref)	Position*	Required**	Pass/Fail	Element (For Ref)	Position*	Required**	Pass/Fail
06	0184				0186			

3.2.4.3.7.7 Digital-A/GSE Mode-7 Reflector Position Section [IV] ***

BP	A1-1 Reflector				A1-2 Reflector			
	Element (For Ref)	Position*	Required**	Pass/Fail	Element (For Ref)	Position*	Required**	Pass/Fail
06	0184				0186			

- * Actual counts from computer printout. Rewriting counts on this data sheet is optional.
 ** Required range for instrument serial number from TDS 6 of AE-26002/1 ± 10 counts. Rewriting range on this data sheet is optional.
 *** GSE Modes do not require verification or testing for PFM & FM modules

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer Date

Customer Representative Date
(Flight Hardware Only)

Quality Control Date

6 Apr 99

TEST DATA SHEET 47
Digital-A/GSE Mode-1 Radiometer Data Section [V] (Paragraph 3.2.4.3.7.2)

BP	A1-1 Reflector			A1-2 Reflector		
	Channel-3*	Required**	Pass/Fail	Channel-9*	Required**	Pass/Fail
01						
02						
03						
04						
05						
06						
07						
08						
09						
10						
11						
12						
13						
14						
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						

* Actual counts from computer printout. Rewriting counts on this data sheet is optional.

** Required = $16,500 \pm 4000$ counts.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

 Test Systems Engineer

 Date

 Customer Representative
 (Flight Hardware Only)

 Date

 Quality Control

 Date

TEST DATA SHEET 48 (Sheet 1 of 2)
Digital-A/GSE Mode-1 Temperature Sensors Section [VI] (Paragraph 3.2.4.3.7.2)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1090	A1-1 Warm Load 1		25 ± 15	
1092	A1-1 Warm Load 2		25 ± 15	
1094	A1-1 Warm Load 3		25 ± 15	
1096	A1-1 Warm Load 4		25 ± 15	
1098	A1-1 Warm Load Center		25 ± 15	
1100	A1-2 Warm Load 1		25 ± 15	
1102	A1-2 Warm Load 2		25 ± 15	
1104	A1-2 Warm Load 3		25 ± 15	
1106	A1-2 Warm Load 4		25 ± 15	
1108	A1-2 Warm Load Center		25 ± 15	
1110	Local Oscillator Channel 7		25 ± 15	
1112	Local Oscillator Channel 8		25 ± 15	
1114	Local Oscillator Channel 15		25 ± 15	
1116	PLL LO #2 Channels 9-14		25 ± 15	
1118	PLL LO #1 Channels 9-14		25 ± 15	
1120	PLLO (Reference Oscillator)**/ Not used ***			
1122	Mixer I.F. Amp. Channel 3		25 ± 15	
1124	Mixer I.F. Amp. Channel 4		25 ± 15	
1126	Mixer I.F. Amp. Channel 5		25 ± 15	
1128	Mixer I.F. Amp. Channel 6		25 ± 15	
1130	Mixer I.F. Amp. Channel 7		25 ± 15	
1132	Mixer I.F. Amp. Channel 8		25 ± 15	
1134	Mixer I.F. Amp. Channels 9-14		25 ± 15	
1136	Mixer I.F. Amp. Channel 15		25 ± 15	

* Value is from the STE printout sheets. Copying data to this sheet is optional.

** For S/N 101 through 104.

*** For S/N 105 and up.

(Continued on Sheet 2)

6 Apr 99

TEST DATA SHEET 48 (Sheet 2 of 2)
Digital-A/GSE Mode-1 Temperature Sensors Section [VI] (Paragraph 3.2.4.3.7.2)

Thermistor Sensors		Recorded Value* (deg. C)	Required Value (deg. C)	Pass/ Fail
Element	Description			
1138	I.F. Amp. Channel 11-14		25 ± 15	
1140	I.F. Amp. Channel 9		25 ± 15	
1142	I.F. Amp. Channel 10		25 ± 15	
1144	I.F. Amp. Channel 11		25 ± 15	
1146	DC/DC Converter		25 ± 15	
1148	I.F. Amp. Channel 13		25 ± 15	
1150	I.F. Amp. Channel 14		25 ± 15	
1152	I.F. Amp. Channel 12		25 ± 15	
1154	RF Shelf A1-1		25 ± 15	
1156	RF Shelf A1-2		25 ± 15	
1158	Detector Preamp Assy.		25 ± 15	
1160	Scan Motor A1-1		25 ± 15	
1162	Scan Motor A1-2		25 ± 15	
1164	Feed Horn A1-1		25 ± 15	
1166	Feed Horn A1-2		25 ± 15	
1168	R.F. Mux A1-1		25 ± 15	
1170	R.F. Mux A1-2		25 ± 15	
1172	Local Oscillator Channel 3		25 ± 15	
1174	Local Oscillator Channel 4		25 ± 15	
1176	Local Oscillator Channel 5		25 ± 15	
1178	Local Oscillator Channel 6		25 ± 15	
1180	Temp Sensor Ref Voltage Count		**	

* Value is from the STE printout sheets. Copying data to this sheet is optional.

** = Count of 24,552 +1765,-1308.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date

Customer Representative
(Flight Hardware Only)

Date

Quality Control

Date

TEST DATA SHEET 49

CH 9 through 14 PLLO	PRT Temp (°C)		Measured * Frequency	Requirements **	Pass/ Fail
PLLO No. 1	PLO No. 1	Xtal *** Osc.		57290.334 MHz ± 50 kHz	
PLLO No. 2	PLO No. 2	Xtal *** Osc.		57290.334 MHz ± 50 kHz	

* Attach spectrum analyzer plots.

**** = At 18°C**

*** PRT not connected on S/N 105 and above.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer

Date _____

**Customer Representative
(Flight Hardware Only)**

Date _____

Quality Control

Date _____

6 Apr 99

TEST DATA SHEET 50 (Sheet 1 of 2)
Radiometer "Relative" NEAT Verification* (Paragraph 3.2.4.4.2.2)

Channels 3, 4, 5, 6, 7, 8, and 15. PLLO No. 1 (Channels 9 through 14)

Channel Number>	3	4	5	6
NEAT (Average of 5 data)	_____	_____	_____	_____
Pass/Fail	_____	_____	_____	_____
NEAT (Specified) K **	0.40	0.25	0.25	0.25
Channel Number>	7	8	9	10
NEAT (Average of 5 data)	_____	_____	_____	_____
Pass/Fail	_____	_____	_____	_____
NEAT (Specified) K **	0.25	0.25	0.25	0.40
Channel Number>	11	12	13	14
NEAT (Average of 5 data)	_____	_____	_____	_____
Pass/Fail	_____	_____	_____	_____
NEAT (Specified) K **	0.40	0.60	0.80	1.20
Channel Number>	15			
NEAT (Average of 5 data)	_____			
Pass/Fail	_____			
NEAT (Specified) K **	0.50			

* Baseline data for acceptance tests. Use first CPT or first LPT data along with specification value for pass/fail criteria

** For reference only

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

 Test Systems Engineer

 Date

 Customer Representative
 (Flight Hardware Only)

 Date

 Quality Control

 Date

TEST DATA SHEET 50 (Sheet 2 of 2)
Radiometer "Relative" NEAT Verification* (Paragraph 3.2.4.4.2.2)

PLLO No. 2 (Channels 9 through 14)

Channel Number>	9	10	11	12
NEAT (Average of 5 data)	_____	_____	_____	_____
Pass/Fail	_____	_____	_____	_____
NEAT (Specified) K **	0.25	0.40	0.40	0.60
Channel Number>	13	14		
NEAT (Average of 5 data)	_____	_____		
Pass/Fail	_____	_____		
NEAT (Specified) K **	0.80	1.20		

* Baseline data for acceptance tests. Use first CPT or first LPT data along with specification value for pass/fail criteria

** For reference only

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer Date

Customer Representative Date
(Flight Hardware Only)

Quality Control Date

6 Apr 99

TEST DATA SHEET 51 (Sheet 1 of 2)
Transient Susceptibility Test (Paragraph 3.2.4.2.1.4, 3.2.4.2.2.9, 3.2.4.2.3.3)

Test Setup Verified: _____
 Signature

3.2.4.2.1.4: +28V Main Bus Load-Induced Transient Test

Subpara	Step	Load Induced Transient	Functional Performance Results/Deviations	Comments/ Observations
3.2.4.2.1.4.2	8	Low frequency in accordance with Figure 8		
3.2.4.2.1.4.3	10	High frequency 1.43 Hz 200 mV p-p		
3.2.4.2.1.4.3	10	High frequency 2.86 Hz 1.00 V p-p		
3.2.4.2.1.4.3	10	High frequency 6.67 Hz 1.50 V p-p		

NOTE: Attach all backup data generated during the test (photos, printouts, plots, test logs, additional comments or observations, etc.) to this data sheet.

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

 Test Systems Engineer Date

 Customer Representative Date
 (Flight Hardware Only)

 Quality Control Date

TEST DATA SHEET 51 (Sheet 2 of 2)
Transient Susceptibility Test (Paragraph 3.2.4.2.1.4, 3.2.4.2.2.9, 3.2.4.2.3.3)

Test Setup Verified: _____
Signature

3.2.4.2.2.9: +28V Pulse Load Bus Load-Induced Transient Test

Subpara	Step	Load Induced Transient	Functional Performance Results/Deviations	Comments/ Observations
3.2.4.2.2.9.2	8	Low frequency in accordance with Figure 13		
3.2.4.2.2.9.3	10	High frequency 1.43 Hz 200 mV p-p		
3.2.4.2.2.9.3	10	High frequency 2.86 Hz 1.00 V p-p		
3.2.4.2.2.9.3	10	High frequency 6.67 Hz 1.50 V p-p		

3.2.4.2.3.3: +28V Analog Telemetry Bus Load-Induced Transient Test

Subpara	Step	Load Induced Transient	Functional Performance Results/Deviations	Comments/ Observations
3.2.4.2.3.3.2	8	Low frequency in accordance with Figure 16		
3.2.4.2.3.3.3	10	High frequency 1.43 Hz 200 mV p-p		
3.2.4.2.3.3.3	10	High frequency 2.86 Hz 1.00 V p-p		
3.2.4.2.3.3.3	10	High frequency 6.67 Hz 1.50 V p-p		

Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720 **Shop Order:** _____ **S/N:** _____

Test Systems Engineer Date

Customer Representative _____ Date _____
 (Flight Hardware Only)

Quality Control	Date
-----------------	------

6 Apr 99

TEST DATA SHEET 52
Channel Identification Test (Paragraph 3.2.4.5)

Channel Number	Antenna Location	Sweeper Freq. Setting (GHz)	Polarization (H/V)	Radiometric Data Counts Δ Counts	Channel Verified (Yes/No)
3	A1-2	50.35	V		
4	A1-2	52.85	V		
5	A1-2	53.70	H		
6	A1-1	54.45	H		
7	A1-1	54.99	V		
8	A1-2	55.55	H		
9	A1-1	57.34	H		
10	A1-1	57.50	H		
11	A1-1	57.564	H		
12	A1-1	57.59	H		
13	A1-1	57.602	H		
14	A1-1	57.608	H		
15	A1-1	89.55	V		


Circle Test: CPT LPT

METSAT/AMSU-A1 System P/N IS-1331720

Shop Order: _____ S/N: _____

Test Systems Engineer_____
Date_____
Customer Representative
(Flight Hardware Only)_____
Date_____
Quality Control_____
Date

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 NASA National Aeronautics and Space Administration				Report Documentation Page			
1. Report No. ---		2. Government Accession No. ---		3. Recipient's Catalog No. ---			
4. Title and Subtitle Integrated Advanced Microwave Sounding Unit-A (AMSU-A), Performance Verification Report				5. Report Date November 1999			
				6. Performing Organization Code ---			
7. Author(s) L. Paliwoda				8. Performing Organization Report No. 11647			
				10. Work Unit No. ---			
9. Performing Organization Name and Address Aerojet 1100 W. Hollyvale Azusa, CA 91702				11. Contract or Grant No. NAS 5-32314			
				13. Type of Report and Period Covered Final			
12. Sponsoring Agency Name and Address NASA Goddard Space Flight Center Greenbelt, Maryland 20771				14. Sponsoring Agency Code ---			
15. Supplementary Notes ---							
16. ABSTRACT (Maximum 200 words) This is the Performance Verification Report, Initial Comprehensive Performance Test Report, P/N 1331720-2-IT, S/N 108/A1, for the Integrated Advanced Microwave Sounding Unit-A (AMSU-A).							
17. Key Words (Suggested by Author(s)) EOS Microwave System				18. Distribution Statement Unclassified --- Unlimited			
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of pages ---		22. Price ---	

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Block 10. Work Unit No. Provide Research and Technology Objectives and Plants (RTOP) number.

Block 11. Contract or Grant No. Provide when applicable.

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Block 15. Supplementary Notes. Information not included

elsewhere: affiliation of authors if additional space is required for Block 9, notice of work sponsored by another agency, monitor of contract, information about supplements (file, data tapes, etc.) meeting site and date for presented papers, journal to which an article has been submitted, note of a report made from a thesis, appendix by author other than shown in Block 7.

Block 16. Abstract. The abstract should be informative rather than descriptive and should state the objectives of the investigation, the methods employed (e.g., simulation, experiment, or remote sensing), the results obtained, and the conclusions reached.

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1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE		3. REPORT TYPE AND DATES COVERED
4. TITLE AND SUBTITLE Integrated Advanced Microwave Sounding Unit-A (AMSU-A), Performance Verification Report			5. FUNDING NUMBERS NAS 5-32314	
6. AUTHOR(S) L. Paliwoda				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Aerojet 1100 W. Hollyvale Azusa, CA 91702			8. PERFORMING ORGANIZATION REPORT NUMBER 11647 November 1999	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) NASA Goddard Space Flight Center Greenbelt, Maryland 20771			10. SPONSORING/MONITORING AGENCY REPORT NUMBER ---	
11. SUPPLEMENTARY NOTES ---				
12a. DISTRIBUTION/AVAILABILITY STATEMENT ---			12b. DISTRIBUTION CODE ---	
13. ABSTRACT (Maximum 200 words) This is the Performance Verification Report, Initial Comprehensive Performance Test Report, P/N 1331720-2-IT, S/N 108/A1, for the Integrated Advanced Microwave Sounding Unit-A (AMSU-A).				
14. SUBJECT TERMS EOS Microwave System			15. NUMBER OF PAGES	
			16. PRICE CODE ---	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT SAR	

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G	-	Grant	TA	-	Task
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NASA - See Handbook NHB 2200.2.

NTIS - Leave blank.

Block 12.b Distribution Code.

DOD - Leave blank.

DOE - Enter DOE distribution categories from the standard Distribution for Unclassified Scientific and Technical Reports.

NASA - Leave blank.

NTIS - Leave blank.

Block 13. Abstract Include a brief *Maximum 200 words* factual summary of the most significant information contained in the report.

Block 14. Subject Terms Keywords or phrases identifying major subjects in the report.

Block 15. Number of Pages Enter the total number of pages.

Block 16. Price Code Enter appropriate price code (NTIS only).


Block 17 - 19. Security Classifications Self-explanatory. Enter U.S. Security Classification in accordance with U.S. Security Regulations (i.e., UNCLASSIFIED). If form contains classified information, stamp classification on the top and bottom of the page.

Block 20. Limitation of Abstract This block must be completed to assign a limitation to the abstract. Enter either UL (unlimited) or SAR (same as report). An entry in this block is necessary if the abstract is to be limited. If blank, the abstract is assumed to be unlimited.

DOCUMENT APPROVAL SHEET

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AEROJET

TITLE <u>Process Specification</u> METSAT/KLM/AMSU-A1, System Comprehensive and Limited Performance Tests Test Procedure				DOCUMENT NO. AE-26156/3C 6 April 1999	
INPUT FROM:		DATE	CDRL:	SPECIFICATION ENGINEER: <i>James A. Gomer</i>	DATE 4-5-99
CHECKED BY: <i>SM W. Sch.</i>		DATE 99-04-06	JOB NUMBER: N/A		DATE
APPROVED SIGNATURES				DEPT. NO.	DATE
System Safety (W. Neighbors) <i>W. G. Neighbors</i>				8331	4/7/99
Product Team Leader (A. Nieto) <i>A. Nieto</i>				8341	4/7/99
Systems Engineer (R. Platt) <i>P. R. Patel</i>				8341	4/7/99
Design Assurance (E. Lorenz) <i>D. Woon (for E. Lorenz)</i>				8331	4/8/99
Quality Assurance (R. Taylor) <i>Imy N. L. (for R. Taylor)</i>				7831	4/8/99
Technical Director/PMO (P. Patel) <i>P. R. Patel</i>				8341	4/7/99
Released: Configuration Management (J. Cavanaugh) <i>J. Cavanaugh</i>				8361	4/12/99
<p>Approved as Final per customer's letter dated 12 April 1999 (ECN CAMSU-2091, CAMSU-2101 and CAMSU-2104)</p>					
<p>By my signature, I certify the above document has been reviewed by me and concurs with the technical requirements related to my area of responsibility.</p>					
<p>(Data Center) FINAL</p>					

 NASA National Aeronautics and Space Administration		Report Documentation Page	
1. Report No. ---	2. Government Accession No. ---	3. Recipient's Catalog No. ---	
4. Title and Subtitle Integrated Advanced Microwave Sounding Unit-A (AMSU-A), Performance Verification Report		5. Report Date July 2000	
		6. Performing Organization Code ---	
7. Author(s) R. Haigh		8. Performing Organization Report No. 11668	
		10. Work Unit No. ---	
9. Performing Organization Name and Address Aerojet 1100 W. Hollyvale Azusa, CA 91702		11. Contract or Grant No. NAS 5-32314	
		13. Type of Report and Period Covered Final	
12. Sponsoring Agency Name and Address NASA Goddard Space Flight Center Greenbelt, Maryland 20771		14. Sponsoring Agency Code ---	
15. Supplementary Notes ---			
16. ABSTRACT (Maximum 200 words) This is the Performance Verification Report, Initial Comprehensive Performance Test Report, P?N 1331720-3-TST, S/N 109/A1, for the Integrated Advanced Microwave Sounding Unit-A (AMSU-A).			
17. Key Words (Suggested by Author(s)) EOS Microwave System		18. Distribution Statement Unclassified --- Unlimited	
19. Security Classif. (of this report) Unclassified	20. Security Classif. (of this page) Unclassified	21. No. of pages	22. Price ---

NASA FORM 1626 OCT 86

PREPARATION OF THE REPORT DOCUMENTATION PAGE

The last page of a report facing the third cover is the Report Documentation Page, RDP. Information presented on this page is used in announcing and cataloging reports as well as preparing the cover and title page. Thus, it is important that the information be correct. Instructions for filling in each block of the form are as follows:

Block 1. Report No. NASA report series number, if preassigned.

Block 2. Government Accession No. Leave blank.

Block 3. Recipient's Catalog No. Reserved for use by each report recipient.

Block 4. Title and Subtitle. Typed in caps and lower case with dash or period separating subtitle from title.

Block 5. Report Date. Approximate month and year the report will be published.

Block 6. Performing Organization Code. Leave blank.

Block 7. Authors. Provide full names exactly as they are to appear on the title page. If applicable, the word editor should follow a name.

Block 8. Performing Organization Report No. NASA installation report control number and, if desired, the non-NASA performing organization report control number.

Block 9. Performing Organization Name and Address. Provide affiliation (NASA program office, NASA installation, or contractor name) of authors.

Block 10. Work Unit No. Provide Research and Technology Objectives and Plants (RTOP) number.

Block 11. Contract or Grant No. Provide when applicable.

Block 12. Sponsoring Agency Name and Address. National Aeronautics and Space Administration, Washington, D.C. 20546-0001. If contractor report, add NASA installation or HQ program office.

Block 13. Type of Report and Period Covered. NASA formal report series; for Contractor Report also list type (interim, final) and period covered when applicable.

Block 14. Sponsoring Agency Code. Leave blank.

Block 15. Supplementary Notes. Information not included

elsewhere: affiliation of authors if additional space is required for Block 9, notice of work sponsored by another agency, monitor of contract, information about supplements (file, data tapes, etc.) meeting site and date for presented papers, journal to which an article has been submitted, note of a report made from a thesis, appendix by author other than shown in Block 7.

Block 16. Abstract. The abstract should be informative rather than descriptive and should state the objectives of the investigation, the methods employed (e.g., simulation, experiment, or remote sensing), the results obtained, and the conclusions reached.

Block 17. Key Words. Identifying words or phrases to be used in cataloging the report.

Block 18. Distribution Statement. Indicate whether report is available to public or not. If not to be controlled, use "Unclassified-Unlimited." If controlled availability is required, list the category approved on the Document Availability Authorization Form (see NHB 2200.2, Form FF427). Also specify subject category (see "Table of Contents" in a current issue of STAR) in which report is to be distributed.

Block 19. Security Classification (of the report). Self-explanatory.

Block 20. Security Classification (of this page). Self-explanatory.

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Block 22. Price Code. If Block 18 shows "Unclassified-Unlimited," provide the NTIS price code (see "NTIS Price Schedules" in a current issue of STAR) and at the bottom of the form add either "For sale by the National Technical Information Service, Springfield, VA 22161-2171" or "For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402-0001," whichever is appropriate.

REPORT DOCUMENTATION PAGE			Form Approved OMB No. 0704-0188	
Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.				
1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE		3. REPORT TYPE AND DATES COVERED
4. TITLE AND SUBTITLE Integrated Advanced Microwave Sounding Unit-A (AMSU-A), Performance Verification Report			5. FUNDING NUMBERS NAS 5-32314	
6. AUTHOR(S) R. Haigh				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Aerojet 1100 W. Hollyvale Azusa, CA 91702			8. PERFORMING ORGANIZATION REPORT NUMBER 11668 July 2000	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) NASA Goddard Space Flight Center Greenbelt, Maryland 20771			10. SPONSORING/MONITORING AGENCY REPORT NUMBER ---	
11. SUPPLEMENTARY NOTES ---				
12a. DISTRIBUTION/AVAILABILITY STATEMENT ---			12b. DISTRIBUTION CODE ---	
13. ABSTRACT (Maximum 200 words) This is the Performance Verification Report, Initial Comprehensive Performance Test Report, P?N 1331720-3-TST, S/N 109/A1, for the Integrated Advanced Microwave Sounding Unit-A (AMSU-A).				
14. SUBJECT TERMS EOS Microwave System			15. NUMBER OF PAGES	
			16. PRICE CODE ---	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT SAR	

GENERAL INSTRUCTIONS FOR COMPLETING SF 298

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Block 2. Report Date Full publication date including day, month, and year, if available (e.g., 1 Jan 88). Must cite at least the year.

Block 3. Type of Report and Dates Covered State whether report is interim, final, etc. If applicable, enter inclusive report dates (e.g., 10 Jun 87 - 30 Jun 88).

Block 4. Title and Subtitle A title is taken from the part of the report that provides the most meaningful and complete information. When a report is prepared in more than one volume report the primary title, add volume number and include subtitle for the specific volume. On classified documents enter the title classification in parentheses.

Block 5. Funding Numbers To include contract and grant numbers; may include program element number(s), project number(s), task number(s), and work unit number(s). Use the following labels:

C	-	Contract	PR	-	Project
G	-	Grant	TA	-	Task
PE	-	Program Element	WU	-	Work Unit Accession No.

Block 6. Author(s) Name(s) of person(s) responsible for writing the report, performing the research, or credited with the content of the report. If editor or compiler, this should follow the name(s).

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Block 8. Performing Organization Report Number Enter the unique alphanumeric report number(s) assigned by the organization performing the report.

Block 9. Sponsoring/Monitoring Agency Name(s) and Address(es) Self-explanatory.

Block 10. Sponsoring/Monitoring Agency Reports Number (if known).

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DOD - See DoDD 5230.24 *Distribution Statement on Technical Documents*

DOE - See authorities.

NASA - See Handbook NHB 2200.2.

NTIS - Leave blank.

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Block 13. Abstract Include a brief *Maximum 200 words* factual summary of the most significant information contained in the report.

Block 14. Subject Terms Keywords or phrases identifying major subjects in the report.

Block 15. Number of Pages Enter the total number of pages.

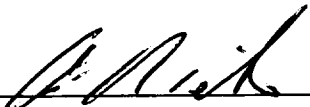
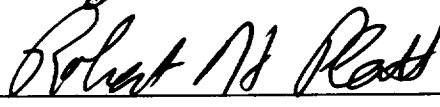

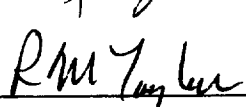
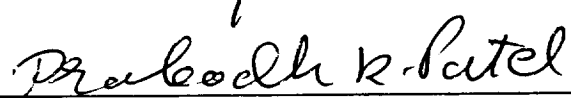
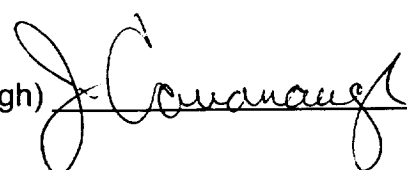
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DOCUMENT APPROVAL SHEET

AEROJET

TITLE <u>Performance Verification Report</u> Initial Comprehensive Report, P/N 1331720-3-IT, S/N 109/A1		DOCUMENT NO. Report 11668 July 2000	
INPUT FROM: R. Haigh	CDRL: 208	SPECIFICATION ENGINEER: N/A	DATE
CHECKED BY: N/A	DATE	JOB NUMBER: N/A	DATE
APPROVED SIGNATURES		DEPT. NO.	DATE
Product Team Leader (A. Nieto) <u></u>		8410	7/25/00
Systems Engineer (R. Platt) <u></u>		8410	7/25/00
Design Assurance (E. Lorenz) <u></u>		8410	7/25/00
Quality Assurance (R. Taylor) <u></u>		7831	7/25/00
PMO/Technical (P. Patel) <u></u>		8410	7/25/00
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By my signature, I certify the above document has been reviewed by me and concurs with the technical requirements related to my area of responsibility.			
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